# COLOR MONITOR
# SERVICE MANUAL

**CHASSIS NO. : CL-32**
**FACTORY MODEL: LS51K**

## MODEL: SDM-S51R

**CAUTION**
BEFORE SERVICING THE UNIT,
READ THE **SAFETY PRECAUTIONS** IN THIS MANUAL.

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# SPECIFICATIONS

**1. LCD CHARACTERISTICS**

Type : TFT XGA LCD Module
Pixel Pitch : 0.297mm x 0.297mm
Color Depth : 6bits(with FRC)/ 16M colors
Active Video Area : 15.0inch (304.128 x 228.096)
Surface Treatment : Anti-Glare, Hard Coating (3H)
Backlight Unit : Top/Bottom edge side 2CCFL
Electrical Interface : LVDS interface

**2. OPTICAL CHARACTERISTICS**

2-1. Viewing Angle by Contrast Ratio $\geq 10$
Left : 55° min. 60°(typ)
Right : 55° min. 60°(typ)
Top : 40° min. 45°(typ)
Bottom : 40° min. 45°(typ)

2-2. Luminance: 180(min.), (9300K)

2-3. Contrast Ratio : 250(min.), 350(typ.)

**3. SIGNAL (Refer to the Timing Chart)**

3-1. Sync Signal
1) Type : Separate Sync. (Horizontal & Vertical)
2) Input Voltage Level : Low=0~0.8V, High=2.1~5.5V
3) Sync Polarity : Positive or Negative

3-2. Video Input Signal
1) Type : R, G, B Analog
2) Voltage Level : 0~0.714 V
a) Color 0, 0 : 0 Vp-p
b) Color 7, 0 : 0.467 Vp-p
c) Color 15, 0 : 0.714 Vp-p
3) Input Impedance : 75 Ω

3-3. Operating Frequency
Horizontal : 28 ~ 61kHz
Vertical : 48 ~ 75Hz

**4. POWER SUPPLY**

4-1. Power
100~240V, 50/60Hz 0.6A

4-2. Power Consumption

| MODE | H/V SYNC | VIDEO | POWER CONSUMPTION | LED COLOR |
|---|---|---|---|---|
| POWER ON (MAX) | ON/ON | ACTIVE | less than 25 W | GREEN |
| STAND-BY | OFF/ON | OFF | less than 3 W | AMBER |
| SUSPEND | ON/OFF | OFF | less than 3 W | AMBER |
| DPMS OFF | - | - | less than 2 W | AMBER |

**5. ENVIRONMENT**

5-1. Operating Temperature: 10°C~35°C (50°F~95°F)
(Ambient)
5-2. Relative Humidity : 10%~80%
(Non-condensing)
5-3. MTBF : 50,000 Hours (Min.)
Lamp Life : 40,000 Hours (Min.)

**6. DIMENSIONS (with TILT/SWIVEL)**

Width : 387mm (15.24")
Depth : 175mm (6.89")
Height : 330mm (12.99")

**7. WEIGHT (with TILT/SWIVEL)**

Net. Weight : 3.6kg (7.94 lbs)
Gross Weight : 5.2kg (11.46 lbs)

# PRECAUTION

**WARNING FOR THE SAFETY-RELATED COMPONENT.**

- There are some special components used in LCD monitor that are important for safety. ***These parts are marked ⚠on the schematic diagram and the replacement parts list.*** It is essential that these critical parts should be replaced with the manufacturer's specified parts to prevent electric shock, fire or other hazard.
- Do not modify original design without obtaining written permission from manufacturer or you will void the original parts and labor guarantee.

**TAKE CARE DURING HANDLING THE LCD MODULE WITH BACKLIGHT UNIT.**

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment person's body are grounded through wrist band.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- The module not be exposed to the direct sunlight.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel become dirty, please wipe it off with a softmaterial. (Cleaning with a dirty or rough cloth may damage the panel.)

**⚠ CAUTION**

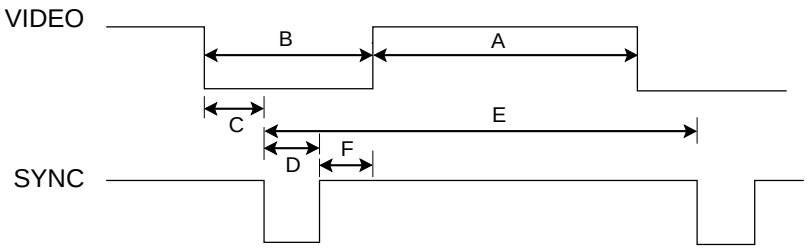
Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

**⚠ WARNING**

BE CAREFUL ELECTRIC SHOCK !

- If you want to replace with the new backlight (CCFL) or inverter circuit, must disconnect the AC adapter because high voltage appears at inverter circuit about 650Vrms.
- Handle with care wires or connectors of the inverter circuit. If the wires are pressed cause short and may burn or take fire.

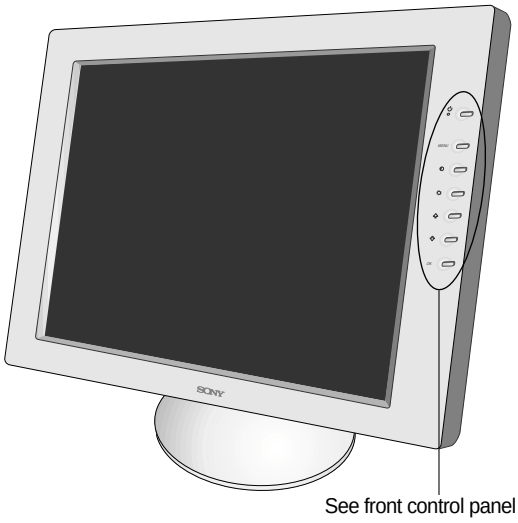
# TIMING CHART



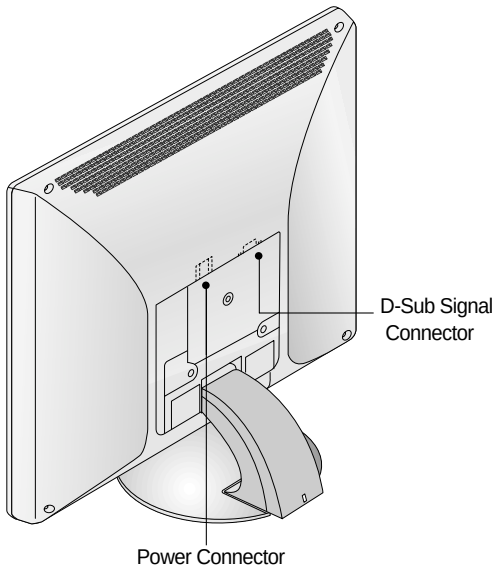

| MODE | H / V | Sync Polarity | Dot Clock | Frequency | Total Period ( E ) | Video Active Time ( A ) | Blanking Time ( B ) | Sync Duration ( D ) | Back Porch ( F ) | Front Porch ( C ) | Resolution |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | H (Pixels) | – | 28.350 | 31.50 KHz | 900 | 720 | 180 | 108 | 54 | 18 | 720 x 400 |
| | V (Lines) | – | | 70.156 Hz | 449 | 400 | 49 | 3 | 34 | 12 | |
| 2 | H (Pixels) | – | 25.175 | 31.469 KHz | 800 | 640 | 160 | 96 | 48 | 16 | 640 x 480 |
| | V (Lines) | – | | 59.940 Hz | 525 | 480 | 45 | 2 | 33 | 10 | |
| 3 | H (Pixels) | – | 30.240 | 35.00 KHz | 864 | 640 | 224 | 64 | 96 | 64 | 640 x 480 |
| | V (Lines) | – | | 66.667 Hz | 525 | 480 | 45 | 3 | 39 | 3 | |
| 4 | H (Pixels) | – | 31.5 | 37.50 KHz | 840 | 640 | 200 | 64 | 120 | 16 | 640 x 480 |
| | V (Lines) | + | | 75.0 Hz | 500 | 480 | 20 | 3 | 16 | 1 | |
| 5 | H (Pixels) | – | 31.505 | 35.162 KHz | 896 | 720 | 176 | 40 | 102 | 34 | 720 x 480 |
| | V (Lines) | – | | 59.901 Hz | 587 | 480 | 107 | 2 | 93 | 12 | |
| 6 | H (Pixels) | – | 36.0 | 35.156 KHz | 1024 | 800 | 224 | 72 | 128 | 24 | 800 x 600 |
| | V (Lines) | – | | 56.25 Hz | 625 | 600 | 25 | 2 | 22 | 1 | |
| 7 | H (Pixels) | + | 40.0 | 37.879 KHz | 1056 | 800 | 256 | 128 | 88 | 40 | 800 x 600 |
| | V (Lines) | + | | 60.317 Hz | 628 | 600 | 28 | 4 | 23 | 1 | |
| 8 | H (Pixels) | – | 50.0 | 48.077 KHz | 1040 | 800 | 240 | 120 | 64 | 56 | 800 x 600 |
| | V (Lines) | – | | 72.188 Hz | 666 | 600 | 66 | 6 | 23 | 37 | |
| 9 | H (Pixels) | + | 49.5 | 46.875 KHz | 1056 | 800 | 256 | 80 | 160 | 16 | 800 x 600 |
| | V (Lines) | + | | 75.0 Hz | 625 | 600 | 25 | 3 | 21 | 1 | |
| 10 | H (Pixels) | – | 57.285 | 49.727 KHz | 1152 | 832 | 320 | 64 | 224 | 32 | 832 x 624 (MAC 17") |
| | V (Lines) | – | | 74.553 Hz | 667 | 624 | 43 | 3 | 37 | 3 | |
| 11 | H (Pixels) | – | 65 | 48.363 KHz | 1344 | 1024 | 320 | 136 | 160 | 24 | 1024 x 768 |
| | V (Lines) | – | | 60.004 Hz | 806 | 768 | 38 | 6 | 29 | 3 | |
| 12 | H (Pixels) | – | 71.640 | 53.946 KHz | 1328 | 1024 | 304 | 176 | 112 | 16 | 1024 x 768 |
| | V (Lines) | – | | 66.110Hz | 816 | 768 | 48 | 4 | 36 | 8 | |
| 13 | H (Pixels) | – | 75 | 56.476 KHz | 1328 | 1024 | 304 | 136 | 144 | 24 | 1024 x 768 |
| | V (Lines) | – | | 70.069 Hz | 806 | 768 | 38 | 6 | 29 | 3 | |
| 14 | H (Pixels) | + | 78.75 | 60.023 KHz | 1312 | 1024 | 288 | 96 | 176 | 16 | 1024 x 768 |
| | V (Lines) | + | | 75.029 Hz | 800 | 768 | 32 | 3 | 28 | 1 | |
| 15 | H (Pixels) | – | 80.00 | 60.241KHz | 1328 | 1024 | 304 | 96 | 176 | 32 | 1024 x 768 (MAC 19") |
| | V (Lines) | – | | 74.928Hz | 804 | 768 | 36 | 3 | 30 | 3 | |

# OPERATING INSTRUCTIONS

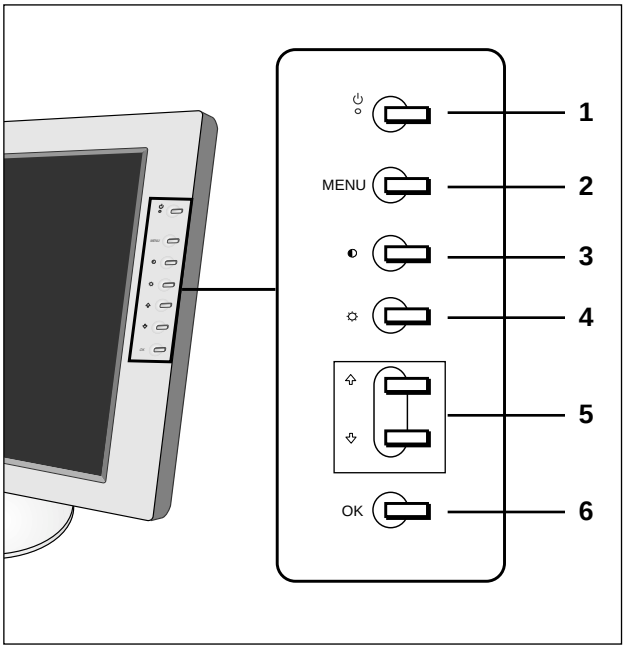
## FRONT VIEW




## REAR VIEW




## Front Control Panel




1. **Power switch and indicator**
   This switch turns the dislay on and off.
   This power indicator lights up in green when the display is turned on, and lights up in orange when the monitor is in power saving mode.

2. **MENU Button**
   This button display or close the main menu.

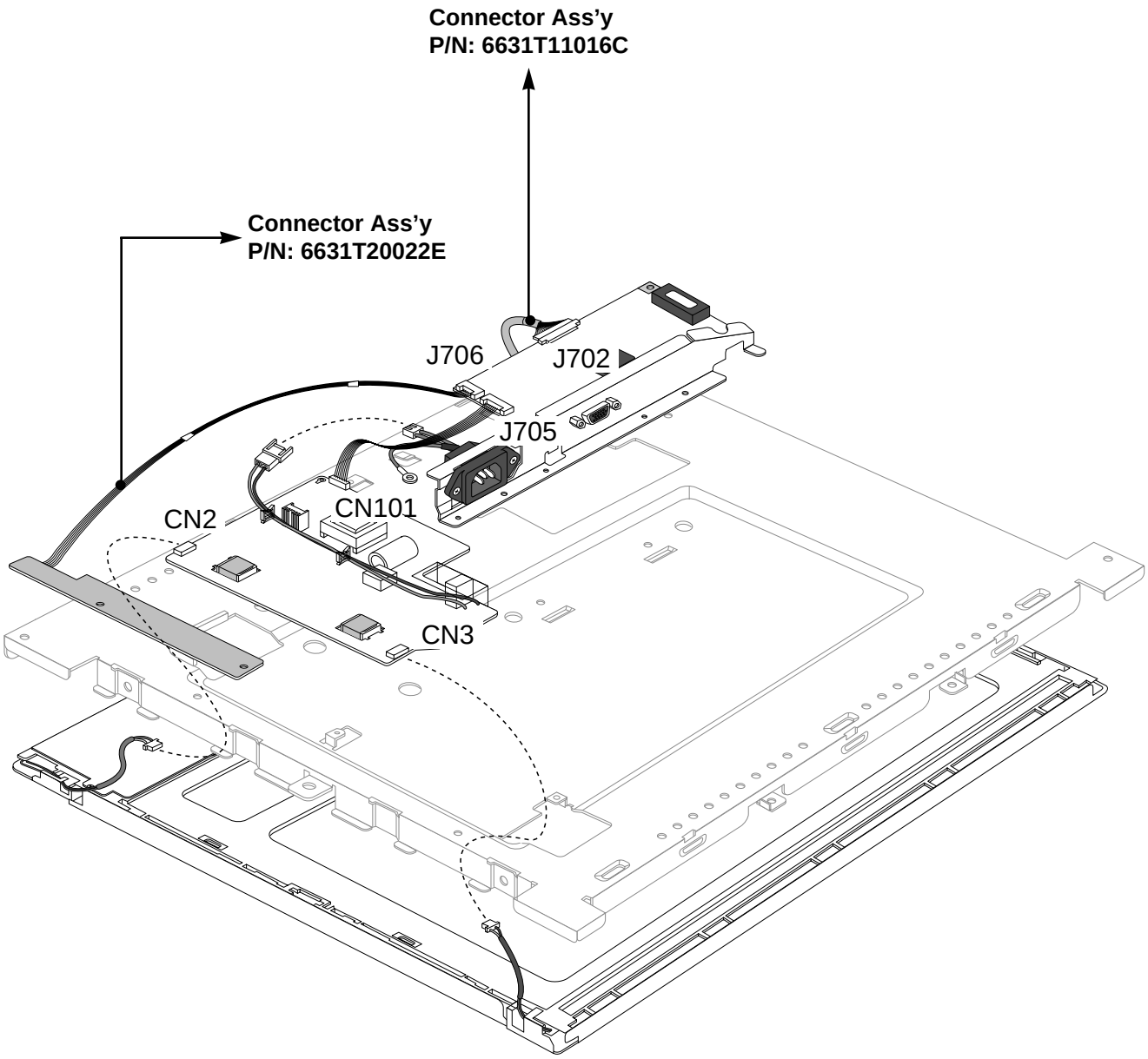
3. **◐ (Contrast) Button**
   This button displays the Contrast menu.

4. **☼ (Brightness) Button**
   This button displays the Brightness menu.

5. **⇧/⇩ Buttons**
   These buttons function as the ⇧/⇩ buttons when selecting the menu items and making adjustments.

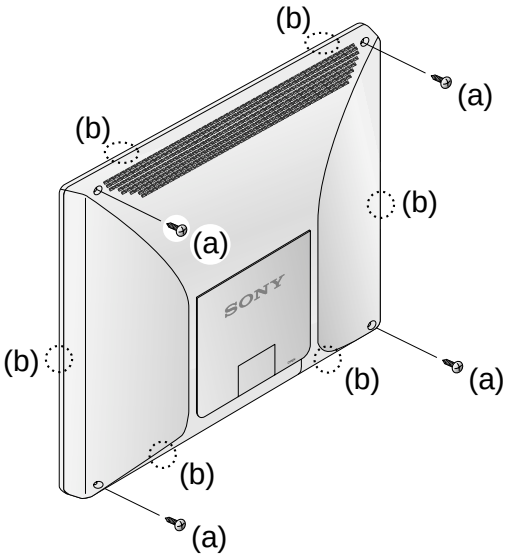
6. **OK Button**
   This button select the item or executes the settings in the menu.

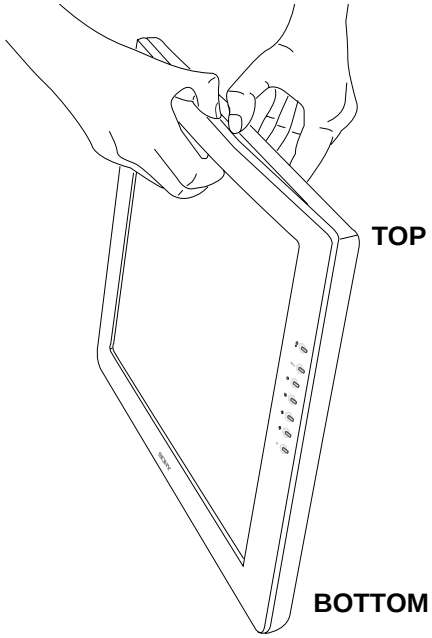
# WIRING DIAGRAM



# DISASSEMBLY

**BACK CABINET REMOVAL**

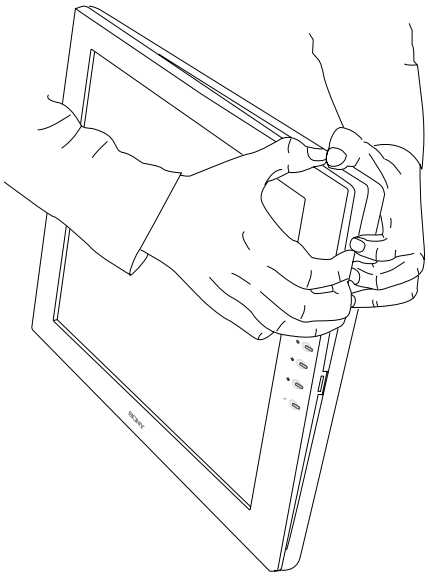



**(b) Latch Point**

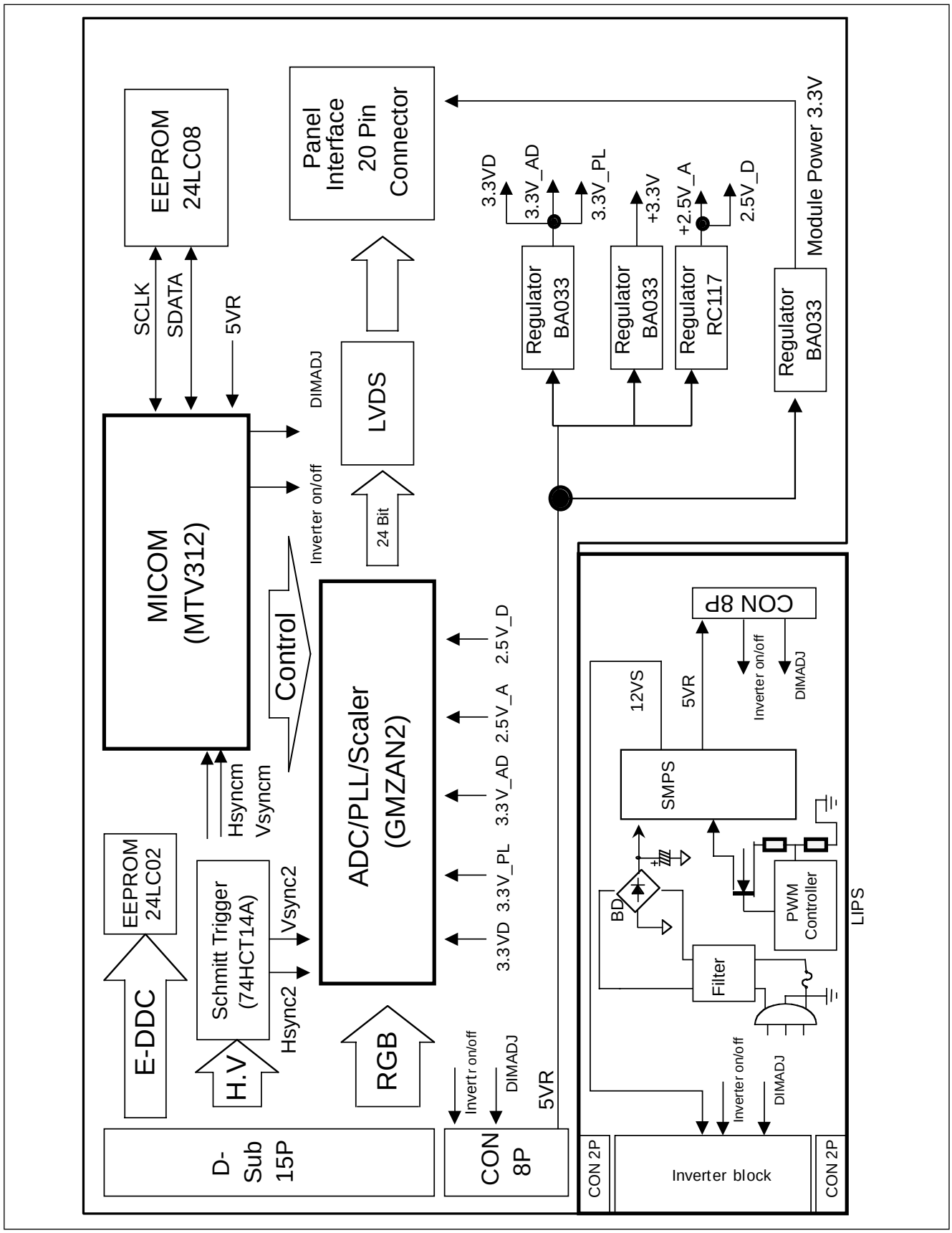
1) Remove four screws (a) from Back cabinet

2) Set the Monitor as picture.
3) Put in the fingers between panel and Front bezel.
4) Pull the Front bezel and Back cabinet.



5) Pull the Side Front bezel.
6) Remove the Back cabinet.

# BLOCK DIAGRAM



# DESCRIPTION OF BLOCK DIAGRAM

**1. Scaler One chip IC(GMZAN2, U201)**

GMZAN2 (U201) is one chip IC which it supports four internal function blocks of Video Amp, PLL, A/D converter and Video processor.
Video signal (0.7Vp.p) clamped through C207, 208, 209 with matching IC's proper cut off voltage.
This signal is processed as a proper 8 bit digital signal by U201's amplifying, phase locking, A/D converting, and scaling operations.
U201 outputs 24bit RGB data and control signals(Clock, Horizontal and Vertical sync, and Data Enable) as LVDS IC's input signals.

**2. System Controller (Microprocessor) Circuit**

1) Microprocessor (U501) distinguishes polarity and frequency by calculating horizontal and vertical sync input from signal source.
2) Microprocessor (U501) carries out power control by sending power-down trigger signal to each IC.
3) Microprocessor (U501) communicates with EEPROM (U502), and GMZAN2 (U201) through IIC(2 lines) or 4 bit bus line. It makes all devices operated properly.
4) Microprocessor (U501) let User adjust screen by OSD function.

**3. LVDS(Low Voltage Differential Signal, U411)**

LVDS transmitter (U411) delivers digital signal to the receiver inside LCD module by method of abstraction.
The abstracted signals are pairs of RIN0+-, RIN1+-, RIN2+-, RIN3+-, and RCLKIN+- of which voltage swing is 0.5V each.
When SHUTON pin's input is High, transmitter goes to power down mode.

**4. DC/DC block**

This block is composed of regulators which supplies 2.5V and 3.3V.
Each regulator's source power is 5VR from LIPS(LCD Inverter and Power Supply) block.
U806 supplies 2.5VD and 2.5VA and U802 supplies 3.3VD, 3.3V_AD, and 3.3V_PL powers to GMZAN2's internal PLL, ADC, Pre-amp, and scaler by dropping down 5VR.
U805 supplies MODPWR-3.3V for LCD module's operation by dropping down 5VR.

**5. LIPS Block (LCD Inverter and Power Supply)**

This block supplies DC voltages of 5VS to interface board and 12V to inverter by converting AC input voltage of 100~240Vac.
Converting method is SMPS(Switching Mode Power Supply).
Inverter on/off signal from microprocessor makes inverter turned on or off .
DIMADJ signal from microprocessor does inverter's current adjustment for Brightness control.

# ADJUSTMENT

**1. Procedures of how to go to service mode.**

1) Enter the service mode of this unit by turning on the power while pressing and holding the "↓" key simultaneously.
2) Press "MENU" key----MAINTAIN.
3) Press "↑" key to enter the service menu.
4) Select the desired function.
5) Press the "MENU" key to exit OSD.
6) Turn off the power and then turn on it again. The monitor then enters the normal mode.
   To enter the service again, repeat the procedure described above.

**Note**

W/B readjustment is required after the panel, board and microcomputer are replaced. However, be sure to perform aging for more than 30 minutes for RGB reset before W/B adjustment.

**2. Setup**

1) Prepare timing and pattern data for a signal generator according to the Sony timing specifications.
2) Connect a monitor video cable to the signal generator.
3) Put Color Analyzer(ex. CA-110) 50cm away from the monitor, specify it vertically in the center of the display, and adjust the focus to the optimum level using an eyepiece.
4) Put the monitor and Color Analyzer(ex. CA-110) in a light-shielded room.
5) Set up [SERVICE MODE] of the monitor.

**3. Operation**

Data is manually set to improve the productivity. The brightness, contrast, and backlight are set to 50, 70 and 100 respectively. After that, the default data of the color temperature to be adjusted is set.

**4. Warm up time**

Warm up for 30 minutes before performing any adjustment.

**5. Adjustment for White Balance**

a. Display Full white pattern at SXGA/60Hz.
b. Set up [SERVICE MODE].
c. Click "INITIAL EEPROM".
c. Enter the service mode in case of show "color calibration complete" message.

**6. 9300K color adjustment**

a. Select "9300K" in "COLOR TEMP" and enter.
b. Use a 35% IRE white video field in the primary mode.
c. Adjust "R/G/B Drive " to secure the color temperature from 6500K R/G/B initial drive data.
c-1. Down “B-Drive” for color Y.
c-2. Down/Up “R-Drive” for color X.
d. Press "OK" key to exit adjust mode.

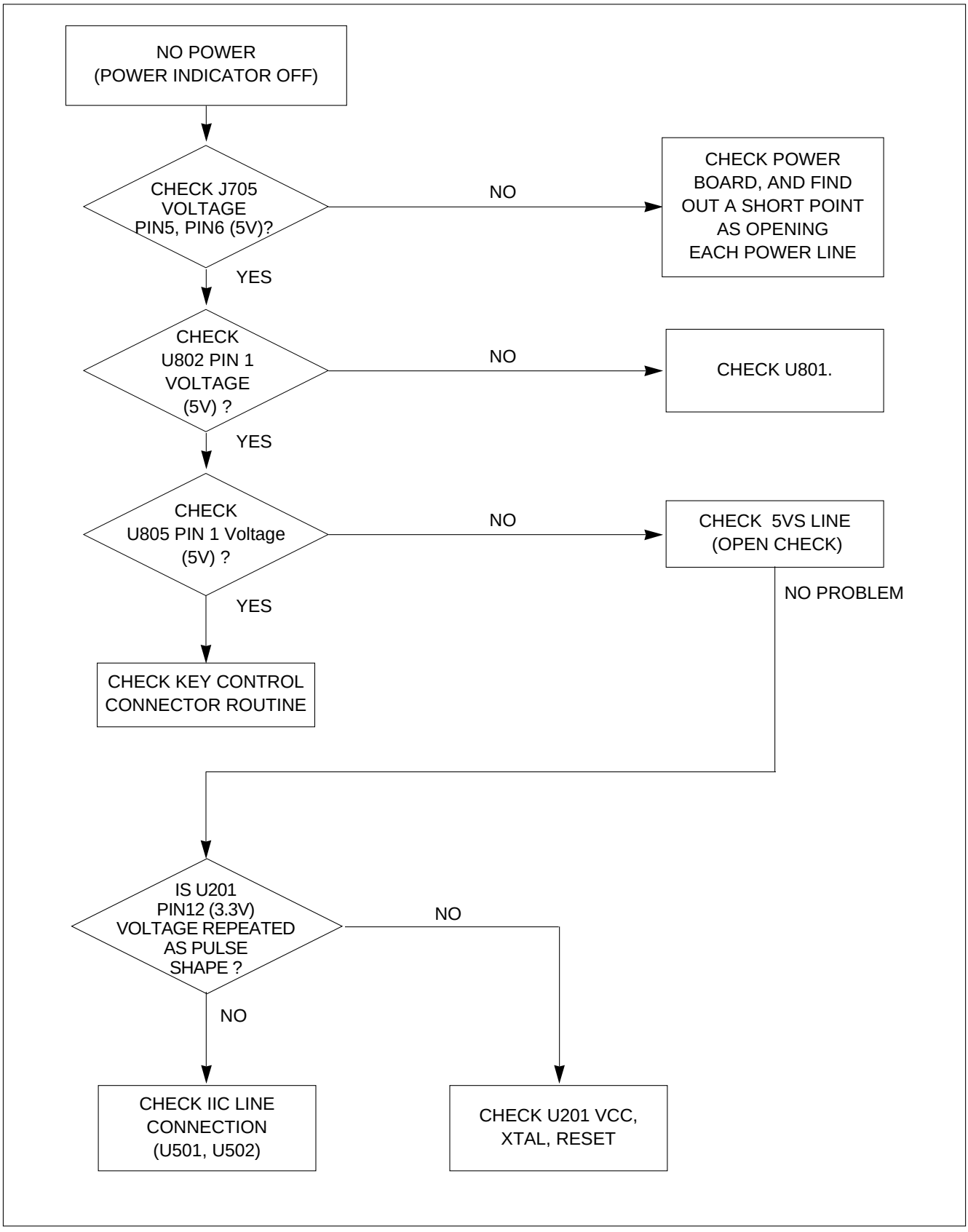
**7. 6500K color adjustment**

a. Select "6500K" in "COLOR TEMP" and enter.
b. Repeat the adjustment procedure as steps b to d at 9300K.

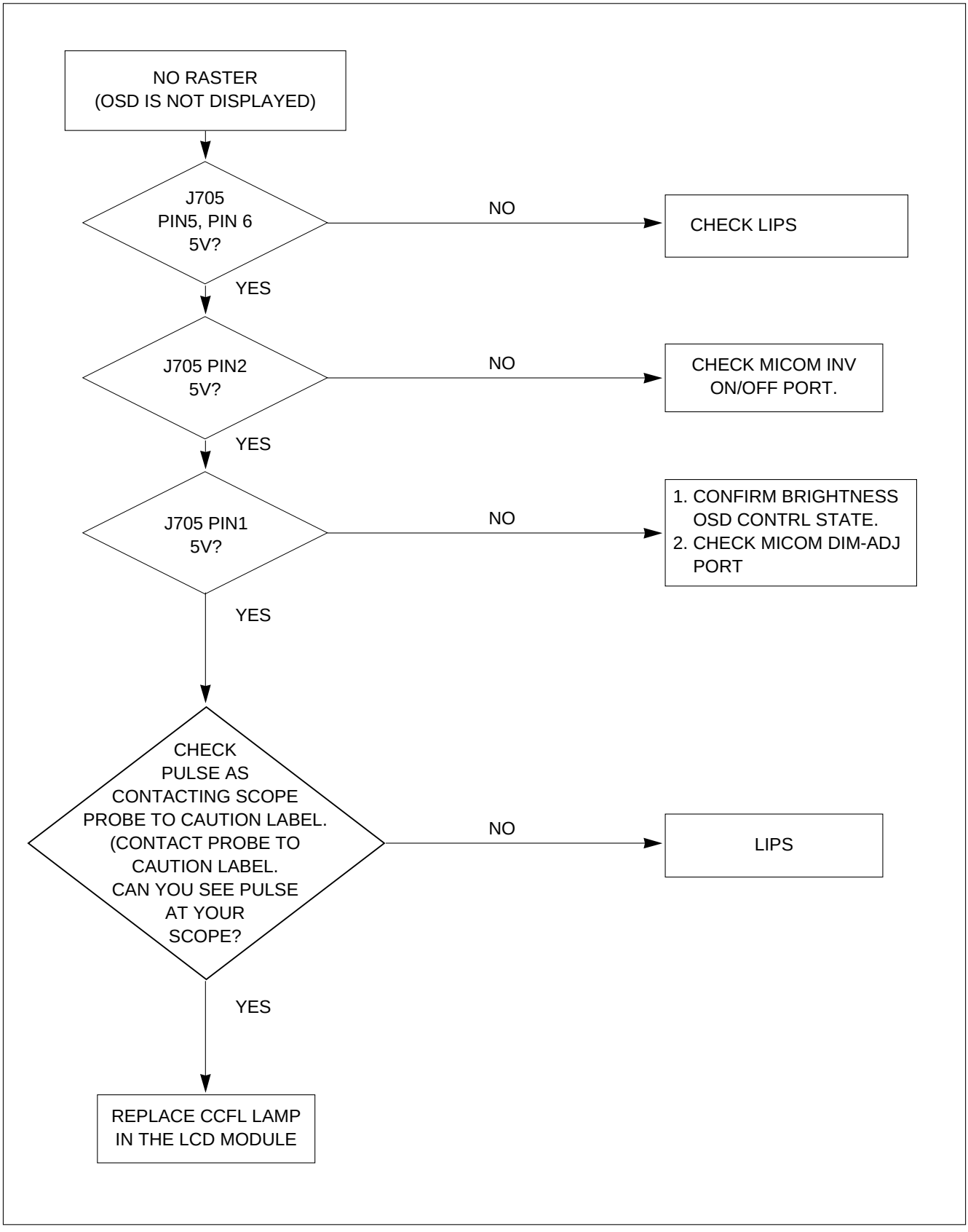
**8. MENU → RESET → ALL RESET**

# TROUBLESHOOTING GUIDE

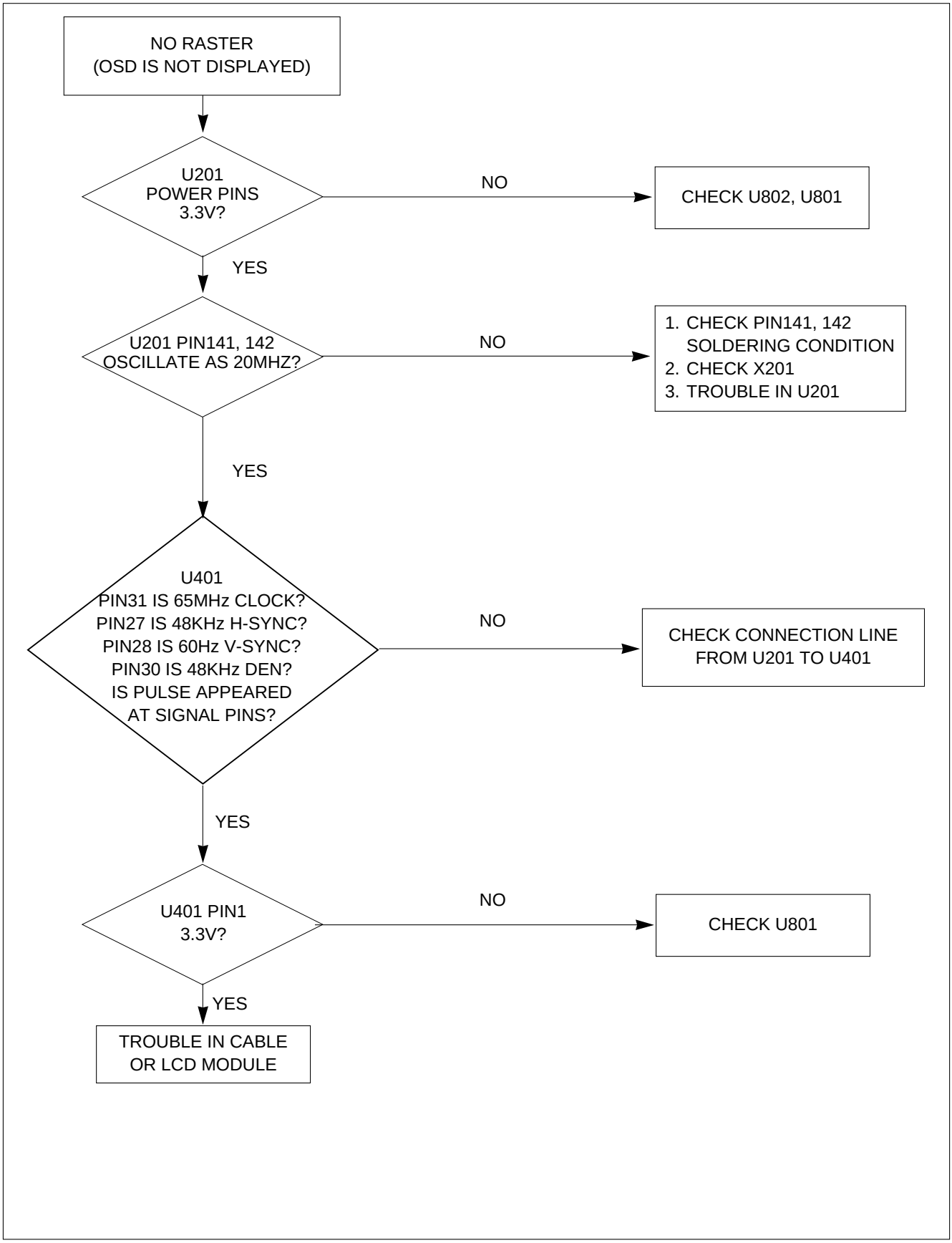
## 1. NO POWER



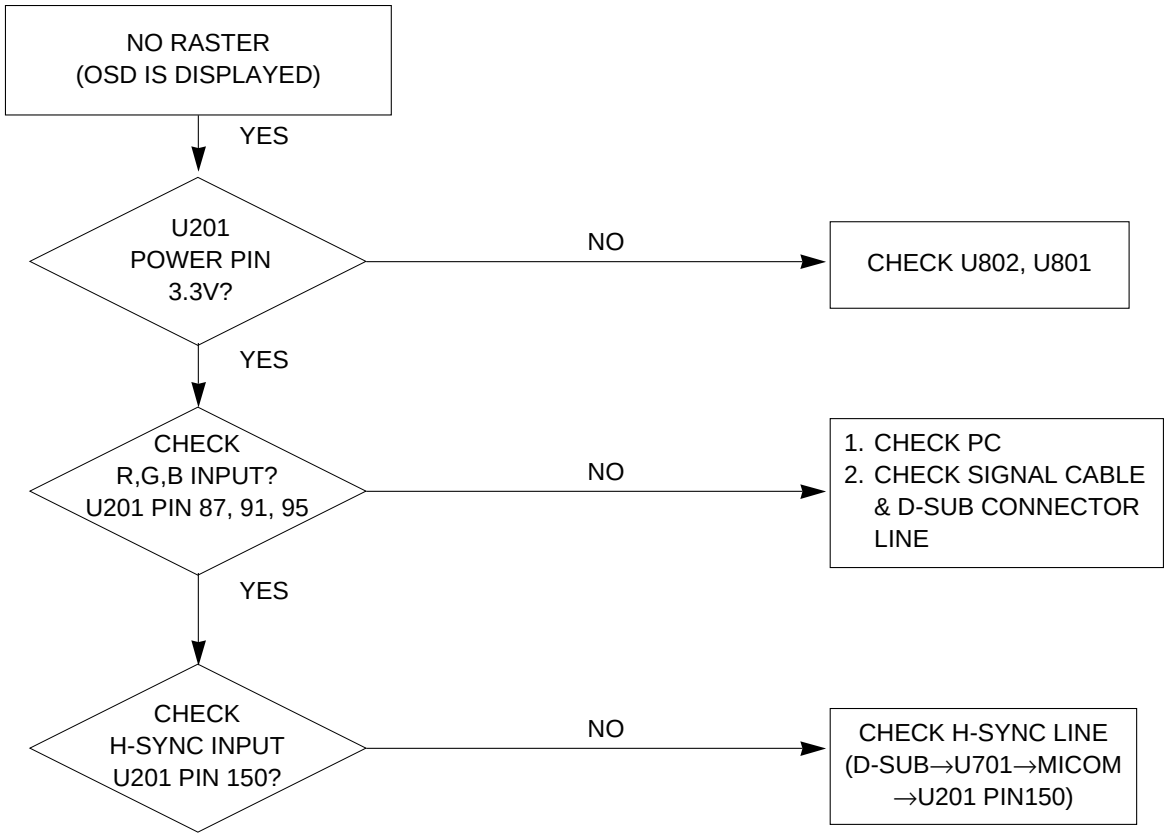
## 2. NO RASTER (OSD IS NOT DISPLAYED) – LIPS



## 3. NO RASTER (OSD IS NOT DISPLAYED) – gmZAN2

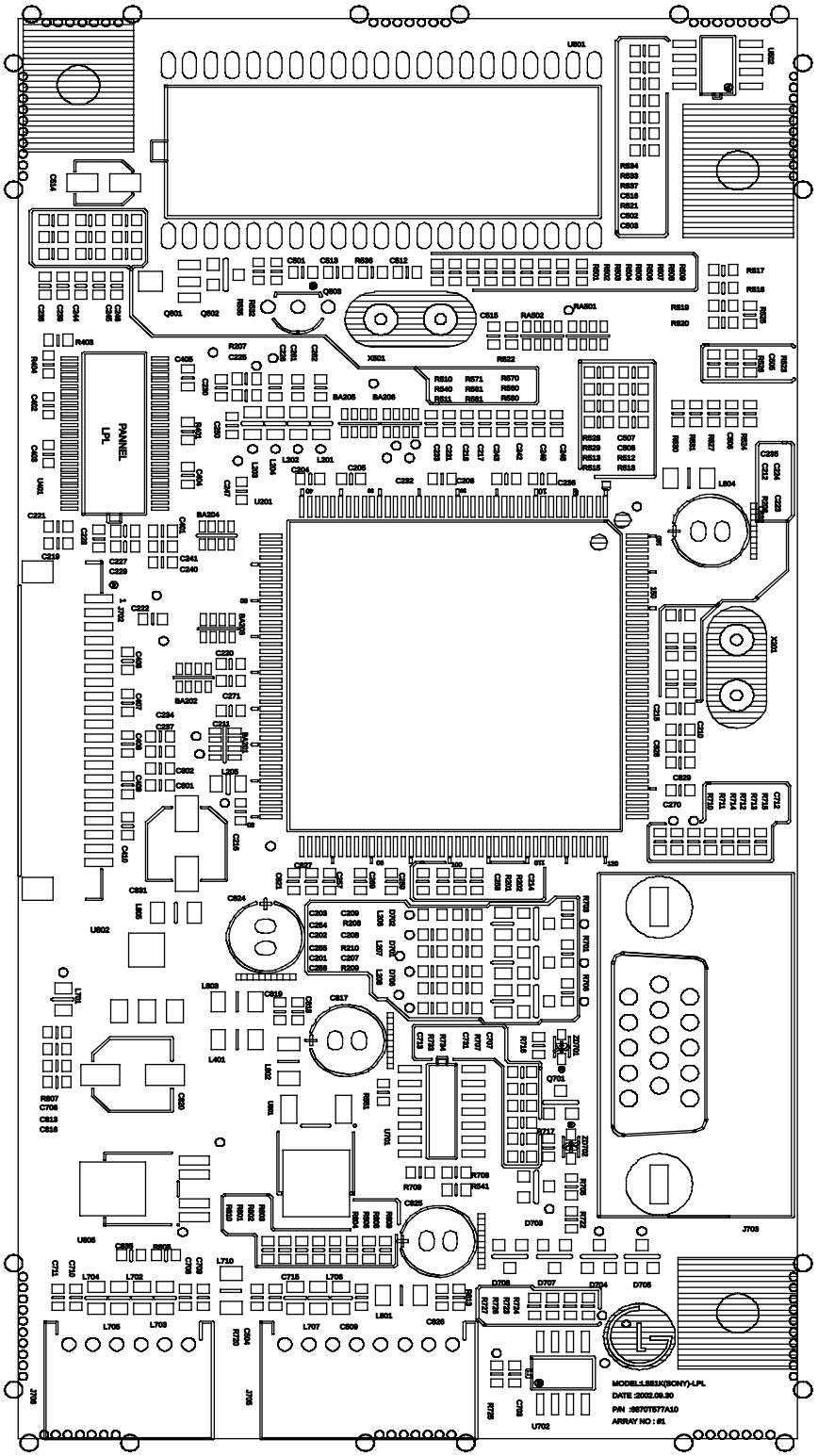


## 4. NO RASTER (OSD IS DISPLAYED) – gmZAN2

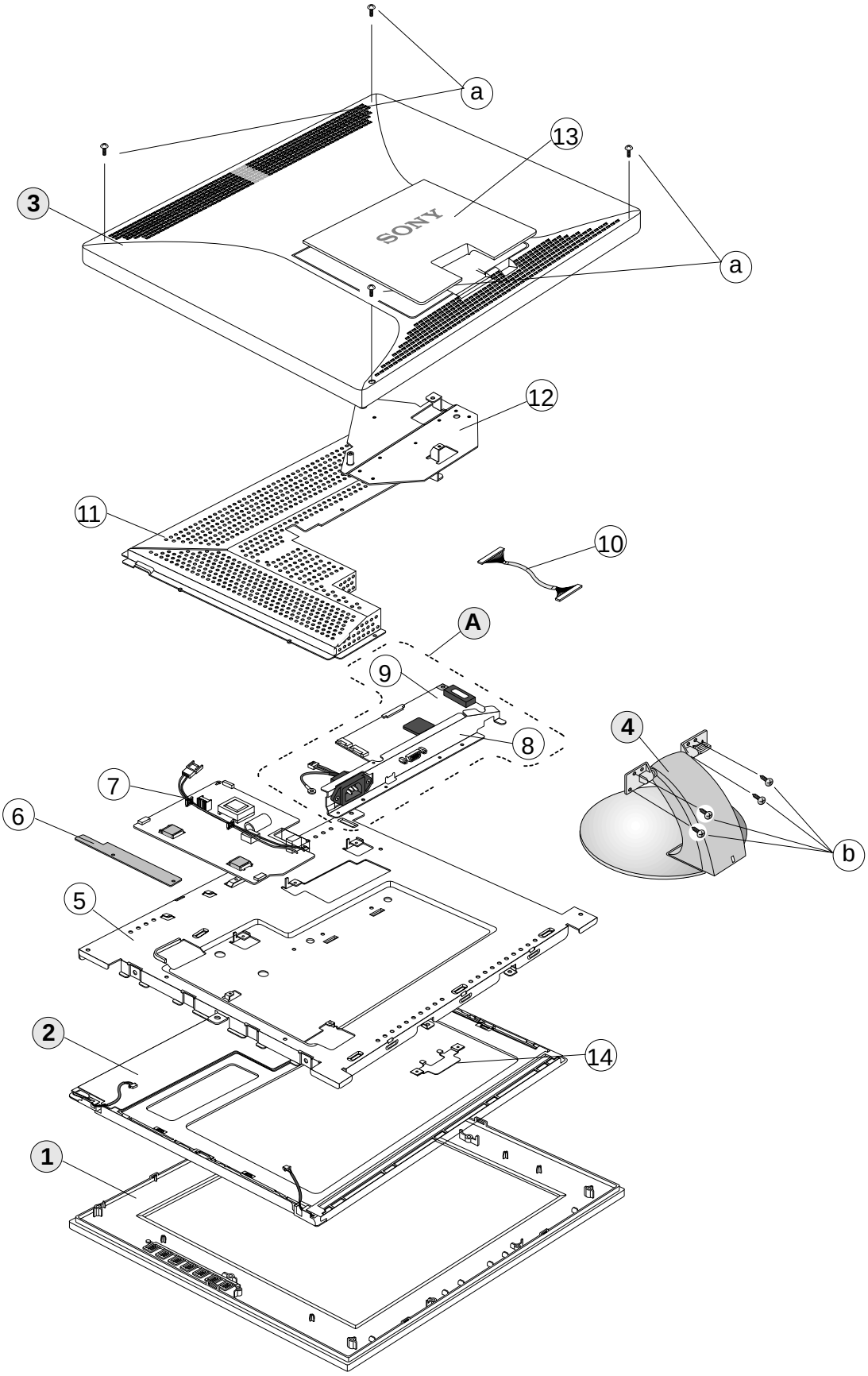


# PRINTED CIRCUIT BOARD

## 1. MAIN BOARD (Component Side)



# EXPLODED VIEW



# EXPLODED VIEW PARTS LIST

| Ref. No. | Part No. | SONY Part No. | Description |
|---|---|---|---|
| 1 | 3091TKL057A | X-4041-325-1 | CABINET ASSEMBLY, LS51K SONY 3090TKL058 PC+ABS **-(SDM-S51R)** |
| | 3091TKL057B | X-4041-328-1 | CABINET ASSEMBLY, LS51K SONY 3090TKL058 BLACK PC+ABS **-(SDM-S51BR)** |
| 2 | 6304FLP025A | 1-805-211-11 | LCD(LIQUID CRYSTAL DISPLAY), LM150X06-A3M1 LG PHILPS TFT COLOR 15.0 INCH XGA LVDS SMM |
| 3 | 3808TKL044A | 4-093-630-01 | BACK COVER , SONY 15 LS51K **-(SDM-S51R)** |
| | 3808TKL044B | 4-093-630-11 | BACK COVER , LS51K BLACK PC+ABS **-(SDM-S51BR)** |
| 4 | 3043TKK107A | X-4041-327-1 | TILT SWIVEL ASSEMBLY, LS51K 3550TKK293/ETC ABS **-(SDM-S51R)** |
| | 3043TKK107B | X-4041-330-1 | TILT SWIVEL ASSEMBLY, LS51K 3550TKK293 ETC/ BLACK ABS **-(SDM-S51BR)** |
| 5 | 4951TKS097A | • | METAL ASSEMBLY, FRAME S51K |
| 6 | 6871TST354A | A-1404-777-A | PWB(PCB) ASSEMBLY, SUB, LS51K(SONY) CONTROL TOTAL SONY CL-32 |
| 7 | 6634B00051C | A-1404-779-A | ADAPTER, AC-DC, LPS2.5 SIZZLE 5V/12A 1A/1A 15INCH LPL |
| 8 | 4950TKK492A | • | METAL, FIX POWER LS51K |
| 9 | 6871TMT367A | • | PWB(PCB) ASSEMBLY, MAIN, LS51K(SONY) ALRDG SONY CL-32 TOTAL |
| 10 | 6631T11016C | 1-900-273-28 | CONNECTOR ASSEMBLY, 20P H-H 100MM UL20276 I/FACE CABLE LB500K |
| 11 | 4951TKK109A | • | METAL ASSEMBLY, SHIELD REAR S51K |
| 12 | 4950TKK491A | • | METAL, PLATE VESA LS51K |
| 13 | 3550TKK292A | 4-093-631-01 | COVER SONY15 CABLE DOOR LS51K **-(SDM-S51R)** |
| | 3550TKK292C | 4-093-631-11 | COVER LS51K CABLE DOOR BLACK PC+ABS **-(SDM-S51BR)** |
| 14 | 4950TKK494A | • | METAL , FIX CONNECTOR-LPL LS51K |
| A | 3313TL5059A | A-1404-778-A | MAIN TOTAL ASSEMBLY, LS51K(SONY) SONY CL-32 |
| a | 332-113F | • | SCREW, PVP+3*12(MSWR/FZMY) |
| b | 332-105B | • | SCREW, PVS+4*10(MSWR/FZMY) |

# REPLACEMENT PARTS LIST

**CAUTION:** BEFORE REPLACING ANY OF THESE COMPONENTS,
READ CAREFULLY THE **SAFETY PRECAUTIONS** IN THIS MANUAL.
* NOTE : **S** SAFETY Mark ⚠
**AL** ALTERNATIVE PARTS

DATE: 2002. 11. 19.

| *S | *AL | LOC. NO. | PART NO. | DESCRIPTION / SPECIFICATION |
|---|---|---|---|---|
| | | **MAIN BOARD** | | |
| | | CAPACITORS | | |
| | | C201 | 0CC080CK11A | 8PF 1608 50V 0.5 PF R/TP NP0 |
| | | C202 | 0CC080CK11A | 8PF 1608 50V 0.5 PF R/TP NP0 |
| | | C203 | 0CC080CK11A | 8PF 1608 50V 0.5 PF R/TP NP0 |
| | | C204 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C205 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C206 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C207 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C208 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C209 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C210 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C211 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C212 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C214 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C215 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C216 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C217 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C218 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C219 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C221 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C222 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C223 | 0CC180CK41A | 18PF 1608 50V 5% R/TP NP0 |
| | | C224 | 0CC180CK41A | 18PF 1608 50V 5% R/TP NP0 |
| | | C226 | 0CC680CK41A | 68PF 1608 50V 5% R/TP NP0 |
| | | C227 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C228 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C229 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C230 | 0CC080CK11A | 8PF 1608 50V 0.5 PF R/TP NP0 |
| | | C231 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C233 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C234 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C237 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C238 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C239 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C240 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C241 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C242 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C243 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C244 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C245 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C246 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C247 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C248 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C249 | 0CC220CK41A | 22PF 1608 50V 5% R/TP NP0 |
| | | C254 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C255 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C256 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C257 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C258 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C259 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C261 | 0CC680CK41A | 68PF 1608 50V 5% R/TP NP0 |
| | | C262 | 0CC680CK41A | 68PF 1608 50V 5% R/TP NP0 |
| | | C269 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |

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| *S | *AL | LOC. NO. | PART NO. | DESCRIPTION / SPECIFICATION |
|---|---|---|---|---|
| | | C270 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C271 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C401 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C402 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C403 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C404 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C405 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C501 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C502 | 0CC101CK41A | 100PF 1608 50V 5% R/TP NP0 |
| | | C503 | 0CC101CK41A | 100PF 1608 50V 5% R/TP NP0 |
| | | C504 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C505 | 0CC101CK41A | 100PF 1608 50V 5% R/TP NP0 |
| | | C506 | 0CC101CK41A | 100PF 1608 50V 5% R/TP NP0 |
| | | C507 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C508 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C509 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C512 | 0CC180CK41A | 18PF 1608 50V 5% R/TP NP0 |
| | | C513 | 0CC180CK41A | 18PF 1608 50V 5% R/TP NP0 |
| | | C514 | 0CH8106F611 | 10UF 16V M 85STD(CYL) R/TP |
| | | C515 | 0CC680CK41A | 68PF 1608 50V 5% R/TP NP0 |
| | | C516 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C703 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C706 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C707 | 0CC680CK41A | 68PF 1608 50V 5% R/TP NP0 |
| | | C712 | 0CC101CK41A | 100PF 1608 50V 5% R/TP NP0 |
| | | C713 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C715 | 0CH3105F946 | 1UF 16V Z F 2012 R/TP |
| | | C731 | 0CC680CK41A | 68PF 1608 50V 5% R/TP NP0 |
| | | C801 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C802 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C813 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C816 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C817 | 0CE107CF610 | 100UF SHL,SD 16V 20% BULK FL |
| | | C818 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C819 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C820 | 0CE107WF6DC | 100UF MVK 16V 20% R/TP(SMD) |
| | | C821 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C824 | 0CE107CF610 | 100UF SHL,SD 16V 20% BULK FL |
| | | C825 | 0CE107CF610 | 100UF SHL,SD 16V 20% BULK FL |
| | | C826 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C827 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C828 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | C829 | 0CK103CK51A | 0.01UF 1608 50V 10% R/TP B(Y |
| | | C831 | 0CE107WF6DC | 100UF MVK 16V 20% R/TP(SMD) |
| | | C832 | 0CE107CF610 | 100UF SHL,SD 16V 20% BULK FL |
| | | C835 | 0CK104CK56A | 0.1UF 1608 50V 10% R/TP X7R |
| | | DIODEs | | |
| | | D701 | 0DS226009AA | KDS226 TP KEC SOT-23 80V 30 |
| | | D702 | 0DS226009AA | KDS226 TP KEC SOT-23 80V 30 |
| | | D703 | 0DS226009AA | KDS226 TP KEC SOT-23 80V 30 |
| | | D704 | 0DS226009AA | KDS226 TP KEC SOT-23 80V 30 |
| | | D705 | 0DS226009AA | KDS226 TP KEC SOT-23 80V 30 |

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| *S | *AL | LOC. NO. | PART NO. | DESCRIPTION / SPECIFICATION |
|---|---|---|---|---|
| | | D706 | 0DS226009AA | KDS226 TP KEC SOT-23 80V 30 |
| | | D707 | 0DS301109AA | MMBD301LT1 TP MOTOROLA SOT23 |
| | | D708 | 0DS301109AA | MMBD301LT1 TP MOTOROLA SOT23 |
| | | ZD701 | 0DZ560009GB | BZT52C5V6S DIODES R/TP SOD32 |
| | | ZD702 | 0DZ560009GB | BZT52C5V6S DIODES R/TP SOD32 |
| | ICs | | | |
| | | U201 | 0IPRPGA002A | GMZAN2-160P GENESIS MICROCHI |
| | | U401 | 0ITH638300B | THC63LVDM83R THINE 56P,TSSOP |
| | | U501 | 0IZZTSZ225A | MYSON 42PIN BK OTP LS51K(SON |
| | | U502 | 0ISG240860B | M24C08W6 SGS-THOMSON 8SOP R/ |
| | | U701 | 0ISTLFA058A | 74F14SCX FAIRCHILD 14P,SOIC |
| | | U702 | 0ICS240213A | CAT24WC02J-TE13 8P SOP TP 2K |
| | | U801 | 0IPMGKE011A | KIA78D33F KEC DPAK R/TP 3.3V |
| | | U802 | 0IPMGFA003B | RC1117S-2.5 FAIRCHILD SOT-22 |
| | | U805 | 0IRH033000A | BA033SFP P/MOLD-5 TP REGULAT |
| | COILs & COREs | | | |
| | | L201 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L202 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L203 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L204 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L205 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L206 | 6210TCE001E | HB-1M2012-800JT CERATEC 2012 |
| | | L207 | 6210TCE001E | HB-1M2012-800JT CERATEC 2012 |
| | | L208 | 6210TCE001E | HB-1M2012-800JT CERATEC 2012 |
| | | L401 | 6210TCE001G | HH-1M3216-501 CERATEC 3216MM |
| | | L701 | 6210TCE001S | HU-1M2012-121 CERATECH 2012M |
| | | L702 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L703 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L704 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L705 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L706 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L707 | 6210TCE001P | HB-1S2012-121JT CERATECH 201 |
| | | L710 | 6210TCE001G | HH-1M3216-501 CERATEC 3216MM |
| | | L801 | 6210TCE001G | HH-1M3216-501 CERATEC 3216MM |
| | | L802 | 6210TCE001G | HH-1M3216-501 CERATEC 3216MM |
| | | L803 | 6210TCE001G | HH-1M3216-501 CERATEC 3216MM |
| | | L804 | 6210TCE001G | HH-1M3216-501 CERATEC 3216MM |
| | | L805 | 6210TCE001G | HH-1M3216-501 CERATEC 3216MM |
| | TRANSISTOR | | | |
| | | Q502 | 0TR390409AE | FAIRCHILD KST3904(LGEMTF) TP |
| | | Q503 | 0IKE704200H | KIA7042AP TO-92 TP 4.2 VOLT |
| | | Q701 | 0TR390409AE | FAIRCHILD KST3904(LGEMTF) TP |
| | RESISTORs | | | |
| | | R201 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R202 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R206 | 0RJ2701D677 | 2.7K OHM 1/10 W 5% 1608 R/TP |
| | | R207 | 0RJ0472D677 | 47 OHM 1/10 W 5% 1608 R/TP |
| | | R208 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R209 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R210 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R401 | 0RJ1002D677 | 10K OHM 1/10 W 5% 1608 R/TP |
| | | R403 | 0RJ1001D677 | 1K OHM 1/10 W 5% 1608 R/TP |
| | | R404 | 0RJ5601D477 | 5.6K OHM 1/10 W 1% 1608 R/TP |
| | | R501 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |

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| *S | *AL | LOC. NO. | PART NO. | DESCRIPTION / SPECIFICATION |
|---|---|---|---|---|
| | | R502 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R503 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R504 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R505 | 0RJ1002D677 | 10K OHM 1/10 W 5% 1608 R/TP |
| | | R506 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R507 | 0RJ1002D677 | 10K OHM 1/10 W 5% 1608 R/TP |
| | | R508 | 0RJ1002D677 | 10K OHM 1/10 W 5% 1608 R/TP |
| | | R509 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R510 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R511 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R512 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R513 | 0RJ1002D677 | 10K OHM 1/10 W 5% 1608 R/TP |
| | | R515 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R516 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R517 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R518 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R519 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R520 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R521 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R522 | 0RJ1500D677 | 150 OHM 1/10 W 5% 1608 R/TP |
| | | R523 | 0RJ0332D677 | 33 OHM 1/10 W 5% 1608 R/TP |
| | | R524 | 0RJ0332D677 | 33 OHM 1/10 W 5% 1608 R/TP |
| | | R525 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R526 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R527 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R528 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R529 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R530 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R531 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R532 | 0RJ3301D677 | 3.3K OHM 1/10 W 5% 1608 R/TP |
| | | R533 | 0RJ0332D677 | 33 OHM 1/10 W 5% 1608 R/TP |
| | | R534 | 0RJ0332D677 | 33 OHM 1/10 W 5% 1608 R/TP |
| | | R535 | 0RJ3301D677 | 3.3K OHM 1/10 W 5% 1608 R/TP |
| | | R536 | 0RJ1004D677 | 1000000 OHM 1/10 W 5% 1608 R |
| | | R537 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R540 | 0RJ1002D677 | 10K OHM 1/10 W 5% 1608 R/TP |
| | | R541 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R551 | 0RJ0000D677 | 0 OHM 1/10 W 5% 1608 R/TP |
| | | R561 | 0RJ0000D677 | 0 OHM 1/10 W 5% 1608 R/TP |
| | | R571 | 0RJ0000D677 | 0 OHM 1/10 W 5% 1608 R/TP |
| | | R581 | 0RJ0000D677 | 0 OHM 1/10 W 5% 1608 R/TP |
| | | R701 | 0RJ0752D677 | 75 OHM 1/10 W 5% 1608 R/TP |
| | | R703 | 0RJ0752D677 | 75 OHM 1/10 W 5% 1608 R/TP |
| | | R705 | 0RJ4700D677 | 470 OHM 1/10 W 5% 1608 R/TP |
| | | R706 | 0RJ0752D677 | 75 OHM 1/10 W 5% 1608 R/TP |
| | | R707 | 0RJ0272D677 | 27 OHM 1/10 W 5% 1608 R/TP |
| | | R708 | 0RJ1500D677 | 150 OHM 1/10 W 5% 1608 R/TP |
| | | R709 | 0RJ1500D677 | 150 OHM 1/10 W 5% 1608 R/TP |
| | | R711 | 0RJ0000D677 | 0 OHM 1/10 W 5% 1608 R/TP |
| | | R712 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R713 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R714 | 0RJ1000D677 | 100 OHM 1/10 W 5% 1608 R/TP |
| | | R715 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R716 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R717 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R722 | 0RJ1001D677 | 1K OHM 1/10 W 5% 1608 R/TP |
| | | R723 | 0RJ0332D677 | 33 OHM 1/10 W 5% 1608 R/TP |
| | | R724 | 0RJ0332D677 | 33 OHM 1/10 W 5% 1608 R/TP |
| | | R725 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R726 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R727 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R733 | 0RJ1501D677 | 1.5K OHM 1/10 W 5% 1608 R/TP |

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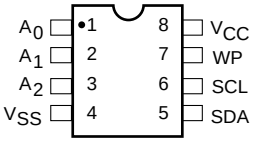
| *S | *AL | LOC. NO. | PART NO. | DESCRIPTION / SPECIFICATION |
|---|---|---|---|---|
| | | R734 | 0RJ4701D677 | 4.7K OHM 1/10 W 5% 1608 R/TP |
| | | R801 | 0RJ0471D677 | 4.7 OHM 1/10 W 5% 1608 R/TP |
| | | R802 | 0RJ0471D677 | 4.7 OHM 1/10 W 5% 1608 R/TP |
| | | R803 | 0RJ0471D677 | 4.7 OHM 1/10 W 5% 1608 R/TP |
| | | R804 | 0RJ0471D677 | 4.7 OHM 1/10 W 5% 1608 R/TP |
| | | R805 | 0RJ1001D677 | 1K OHM 1/10 W 5% 1608 R/TP |
| | | R806 | 0RJ0471D677 | 4.7 OHM 1/10 W 5% 1608 R/TP |
| | | R807 | 0RJ1003D677 | 100K OHM 1/10 W 5% 1608 R/TP |
| | | R808 | 0RJ0471D677 | 4.7 OHM 1/10 W 5% 1608 R/TP |
| | | R809 | 0RJ0471D677 | 4.7 OHM 1/10 W 5% 1608 R/TP |
| | | R810 | 0RJ0471D677 | 4.7 OHM 1/10 W 5% 1608 R/TP |
| | | R813 | 0RJ1001D677 | 1K OHM 1/10 W 5% 1608 R/TP |
| | | RA501 | 0RHZTCZ001A | 100 OHM 1/16 W 5% 3215 R/TP |
| | | RA502 | 0RHZTCZ001A | 100 OHM 1/16 W 5% 3215 R/TP |
| | OTHERs | | | |
| | | X201 | 6212AA2004B | HC-49U TXC 20.0MHZ +/- 30 PP |
| | | X501 | 6212AA2004A | HC-49U TXC 12.0MHZ +/- 30 PP |
| | **CONTROL BOARD** | | | |
| | | R1 | 0RD4701Q609 | 4.70K 1/4W(3 5% TA52 |
| | | R2 | 0RD4701Q609 | 4.70K 1/4W(3 5% TA52 |
| | | R3 | 0RD1501Q609 | 1.50K 1/4W(3 5% TA52 |
| | | R4 | 0RD1501Q609 | 1.50K 1/4W(3 5% TA52 |
| | | R5 | 0RD3301Q609 | 3.30K 1/4W(3 5% TA52 |
| | | R6 | 0RD3301Q609 | 3.30K 1/4W(3 5% TA52 |
| | | R7 | 0RD9101Q609 | 9.10K 1/4W(3 5% TA52 |
| | | SW1 | 140-058E | SKHV10910B LGEC NON 12V 20A |
| | | SW2 | 140-058E | SKHV10910B LGEC NON 12V 20A |
| | | SW3 | 140-058E | SKHV10910B LGEC NON 12V 20A |
| | | SW4 | 140-058E | SKHV10910B LGEC NON 12V 20A |
| | | SW5 | 140-058E | SKHV10910B LGEC NON 12V 20A |
| | | SW6 | 140-058E | SKHV10910B LGEC NON 12V 20A |
| | | SW7 | 140-058E | SKHV10910B LGEC NON 12V 20A |
| | | ZD1 | 0DZ560009AG | GDZJ5.6B TP GRANDE DO-34 500 |
| | | ZD2 | 0DZ560009AG | GDZJ5.6B TP GRANDE DO-34 500 |
| | | LED1 | 0DLLT0089AA | LITEON LTL-1BEDJ-0C2 TP GREE |

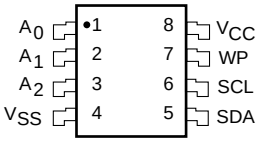
# PIN CONFIGURATION

## CAT24WC02J-TE13 8P

DIP Package(p)




SOIX Package(J)



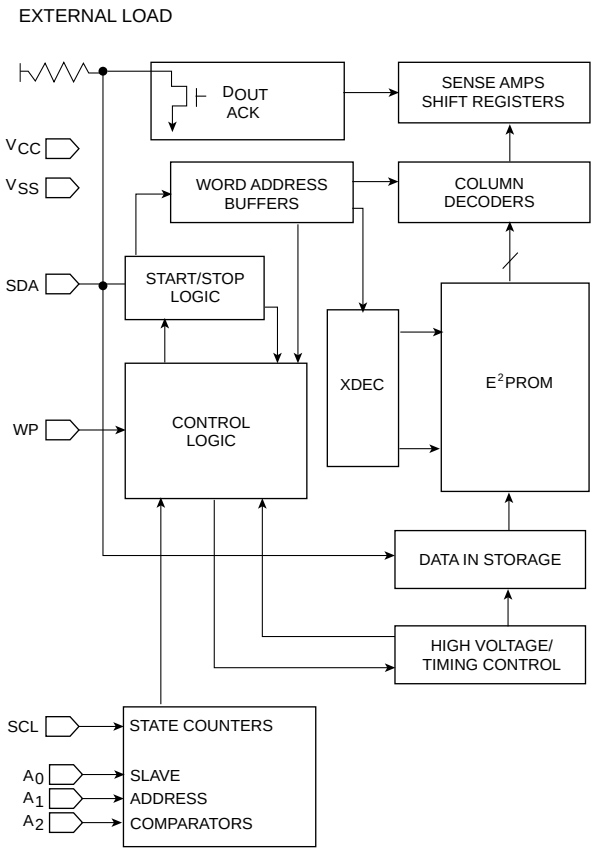

TSSOP Package(U)

**PIN CONFIGURATION**

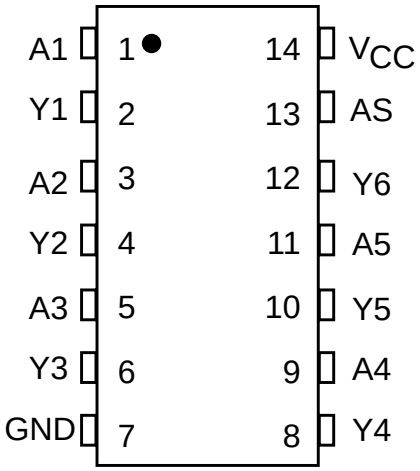
**PIN FUNCTION**

| Pin Name | Function |
|---|---|
| A0, A1, A2 | Device Adress Inputs |
| SDA | Serial Data/Address |
| SCL | Serial Clock |
| WP | Write Protect |
| Vcc | +1.8V to + 6.0V power Supply |
| Vss | Ground |

**BLOCK DIAGRAM**

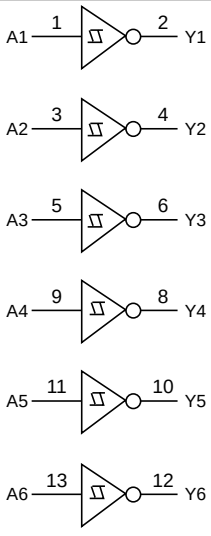



## MC74HCT14ADR2 14P

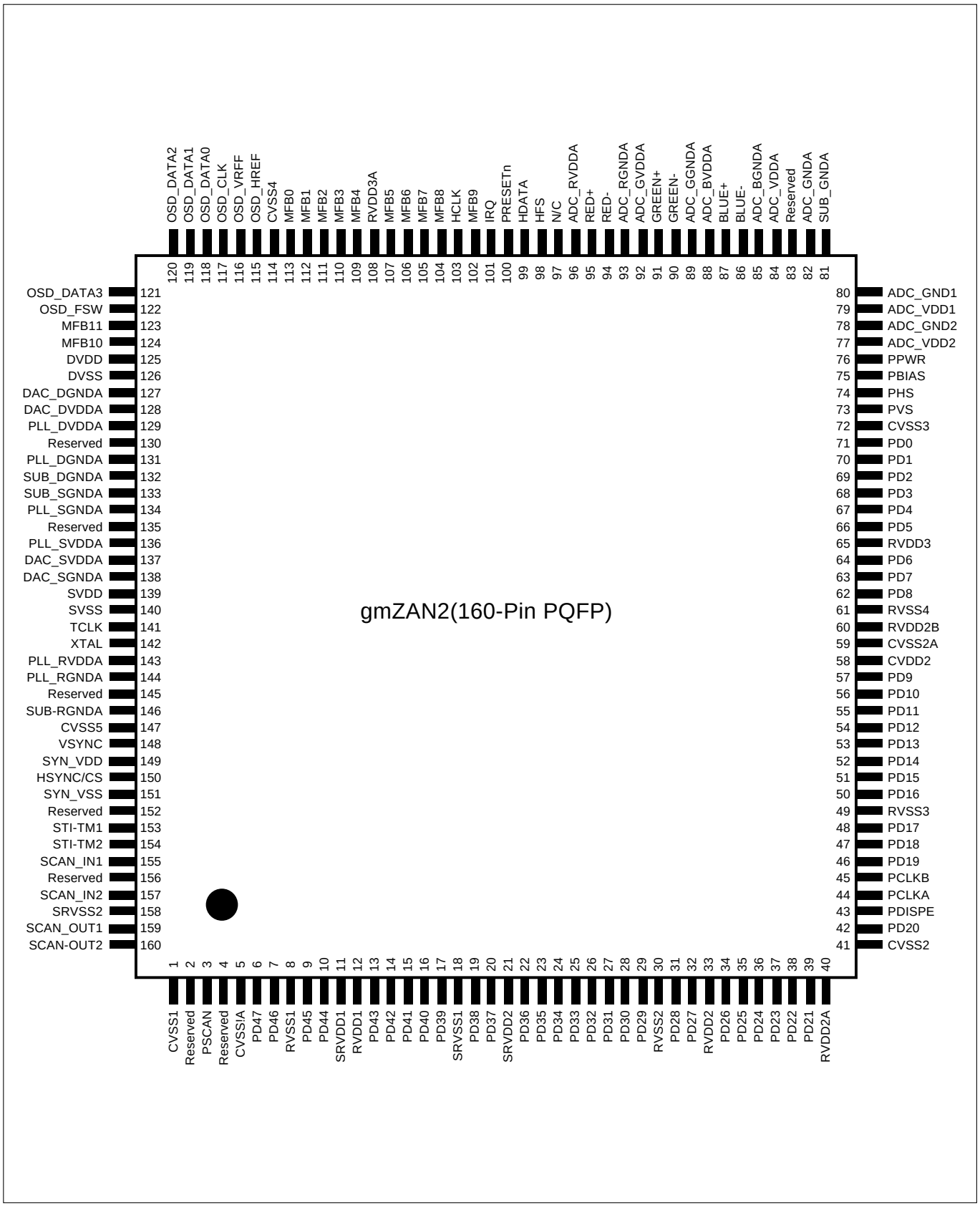



**PIN CONFIGURATION**

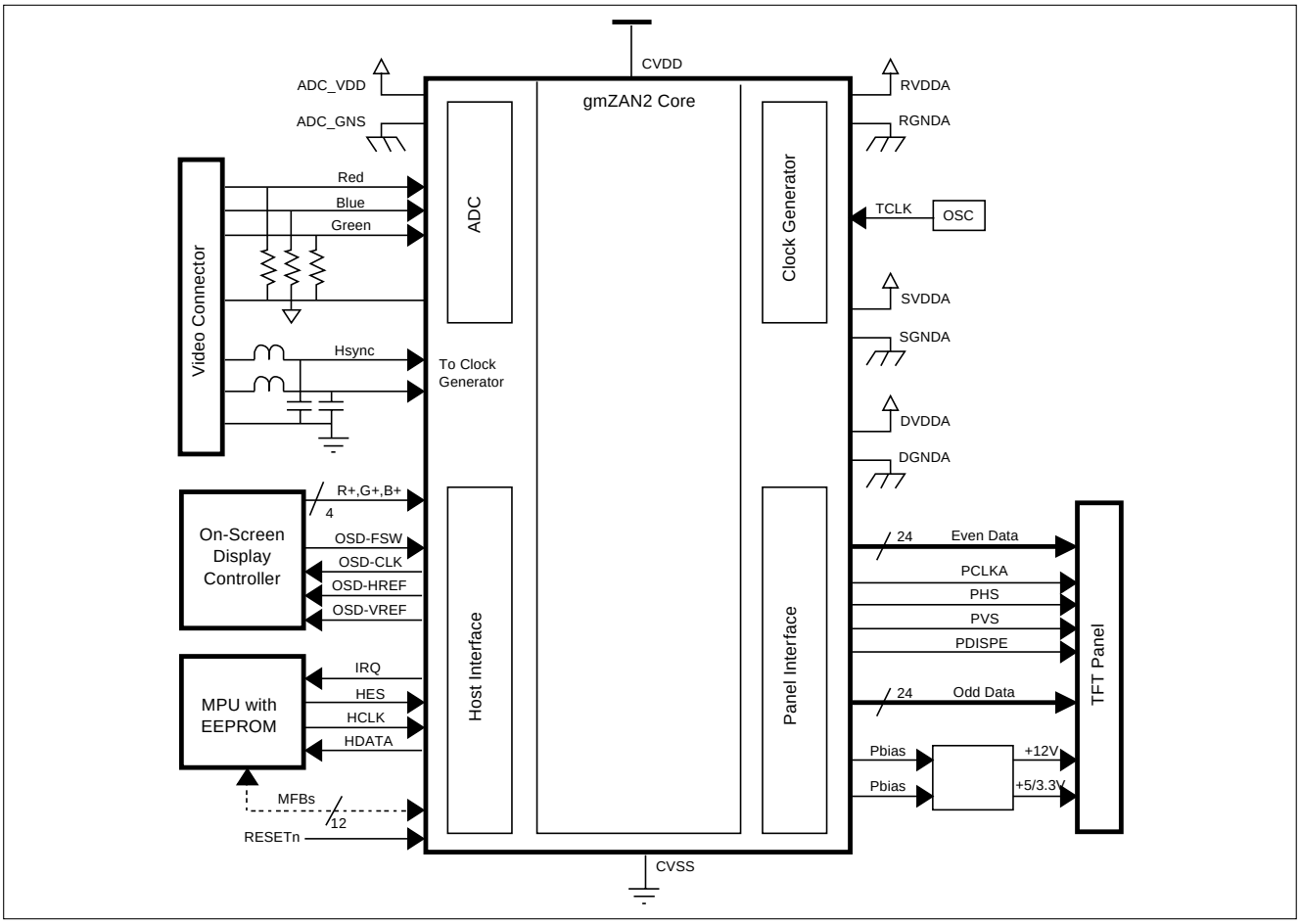
**BLOCK DIAGRAM**



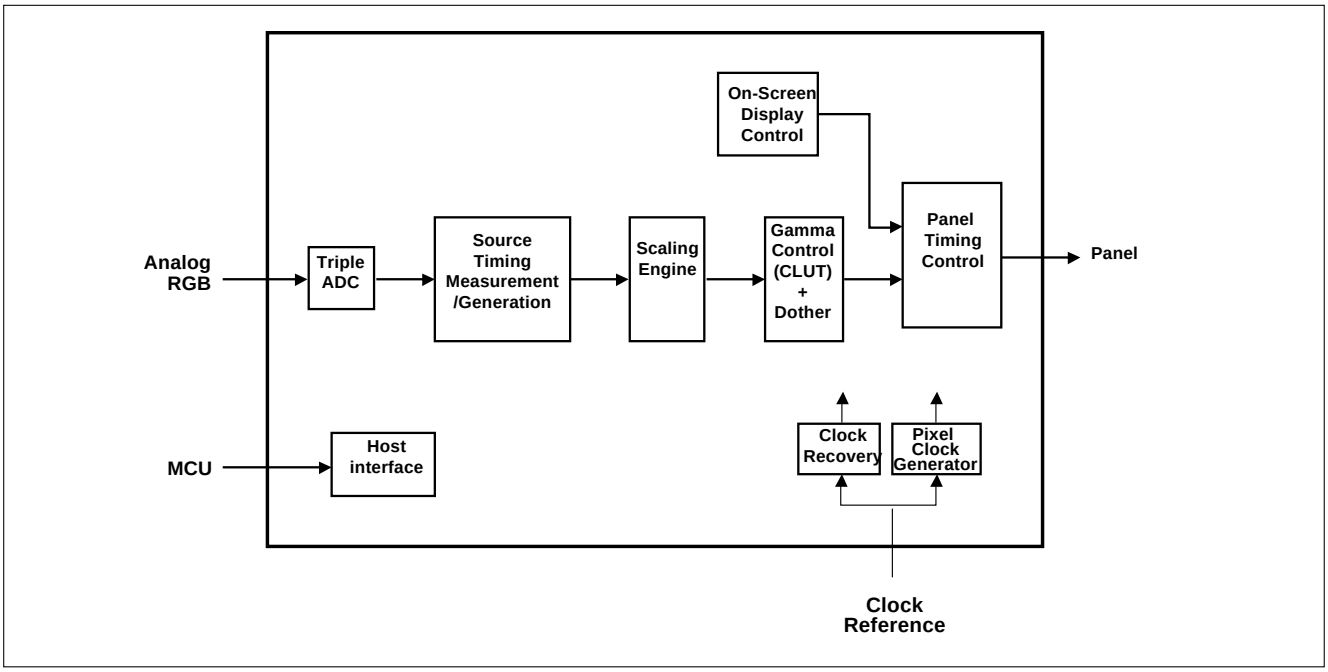

PIN 14=$V_{CC}$
PIN 7=GND


gmZAN2(160-Pin PQFP)
120 OSD_DATA2
119 OSD_DATA1
118 OSD_DATA0
117 OSD_CLK
116 OSD_VRFF
115 OSD_HREF
114 CVSS4
113 MFB0
112 MFB1
111 MFB2
110 MFB3
109 MFB4
108 RVDD3A
107 MFB5
106 MFB6
105 MFB7
104 MFB8
103 HCLK
102 MFB9
101 IRQ
100 PRESETn
99 HDATA
98 HFS
97 N/C
96 ADC_RVDDA
95 RED+
94 RED-
93 ADC_RGNDA
92 ADC_GVDDA
91 GREEN+
90 GREEN-
89 ADC_GGNDA
88 ADC_BVDDA
87 BLUE+
86 BLUE-
85 ADC_BGNDA
84 ADC_VDDA
83 Reserved
82 ADC_GNDA
81 SUB_GNDA
121 OSD_DATA3
122 OSD_FSW
123 MFB11
124 MFB10
125 DVDD
126 DVSS
127 DAC_DGNDA
128 DAC_DVDDA
129 PLL_DVDDA
130 Reserved
131 PLL_DGNDA
132 SUB_DGNDA
133 SUB_SGNDA
134 PLL_SGNDA
135 Reserved
136 PLL_SVDDA
137 DAC_SVDDA
138 DAC_SGNDA
139 SVDD
140 SVSS
141 TCLK
142 XTAL
143 PLL_RVDDA
144 PLL_RGNDA
145 Reserved
146 SUB-RGNDA
147 CVSS5
148 VSYNC
149 SYN_VDD
150 HSYNC/CS
151 SYN_VSS
152 Reserved
153 STI-TM1
154 STI-TM2
155 SCAN_IN1
156 Reserved
157 SCAN_IN2
158 SRVSS2
159 SCAN_OUT1
160 SCAN-OUT2
80 ADC_GND1
79 ADC_VDD1
78 ADC_GND2
77 ADC_VDD2
76 PPWR
75 PBIAS
74 PHS
73 PVS
72 CVSS3
71 PD0
70 PD1
69 PD2
68 PD3
67 PD4
66 PD5
65 RVDD3
64 PD6
63 PD7
62 PD8
61 RVSS4
60 RVDD2B
59 CVSS2A
58 CVDD2
57 PD9
56 PD10
55 PD11
54 PD12
53 PD13
52 PD14
51 PD15
50 PD16
49 RVSS3
48 PD17
47 PD18
46 PD19
45 PCLKB
44 PCLKA
43 PDISPE
42 PD20
41 CVSS2
1 CVSS1
2 Reserved
3 PSCAN
4 Reserved
5 CVSSIA
6 PD47
7 PD46
8 RVSS1
9 PD45
10 PD44
11 SRVDD1
12 RVDD1
13 PD43
14 PD42
15 PD41
16 PD40
17 PD39
18 SRVSS1
19 PD38
20 PD37
21 SRVDD2
22 PD36
23 PD35
24 PD34
25 PD33
26 PD32
27 PD31
28 PD30
29 PD29
30 RVSS2
31 PD28
32 PD27
33 RVDD2
34 PD26
35 PD25
36 PD24
37 PD23
38 PD22
39 PD21
40 RVDD2A

## System-level Block Diagram

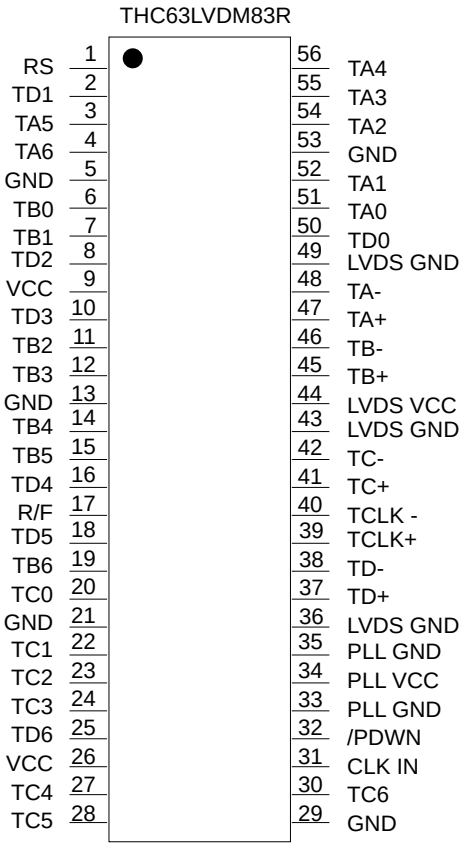



## Block Diagram for gmZAN2

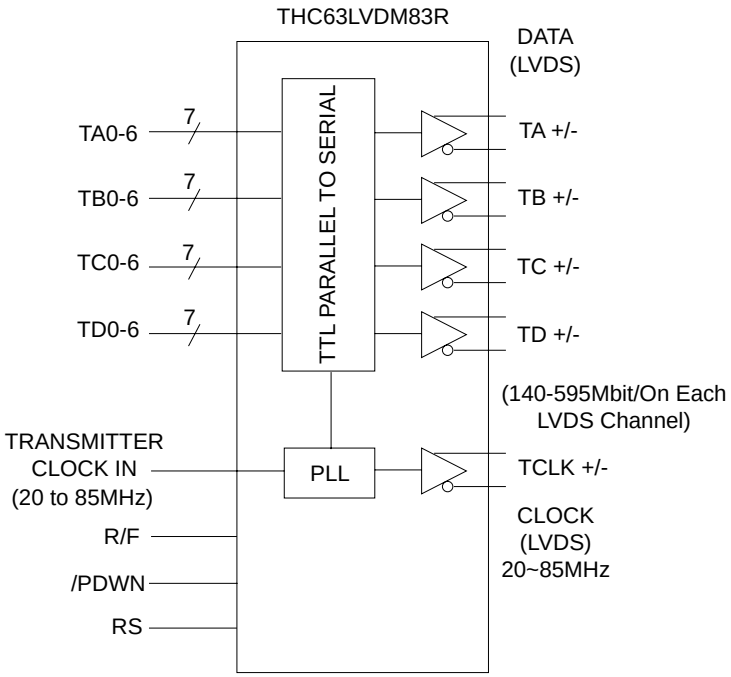


## THC63LVDM83R

### PIN CONFIGURATION

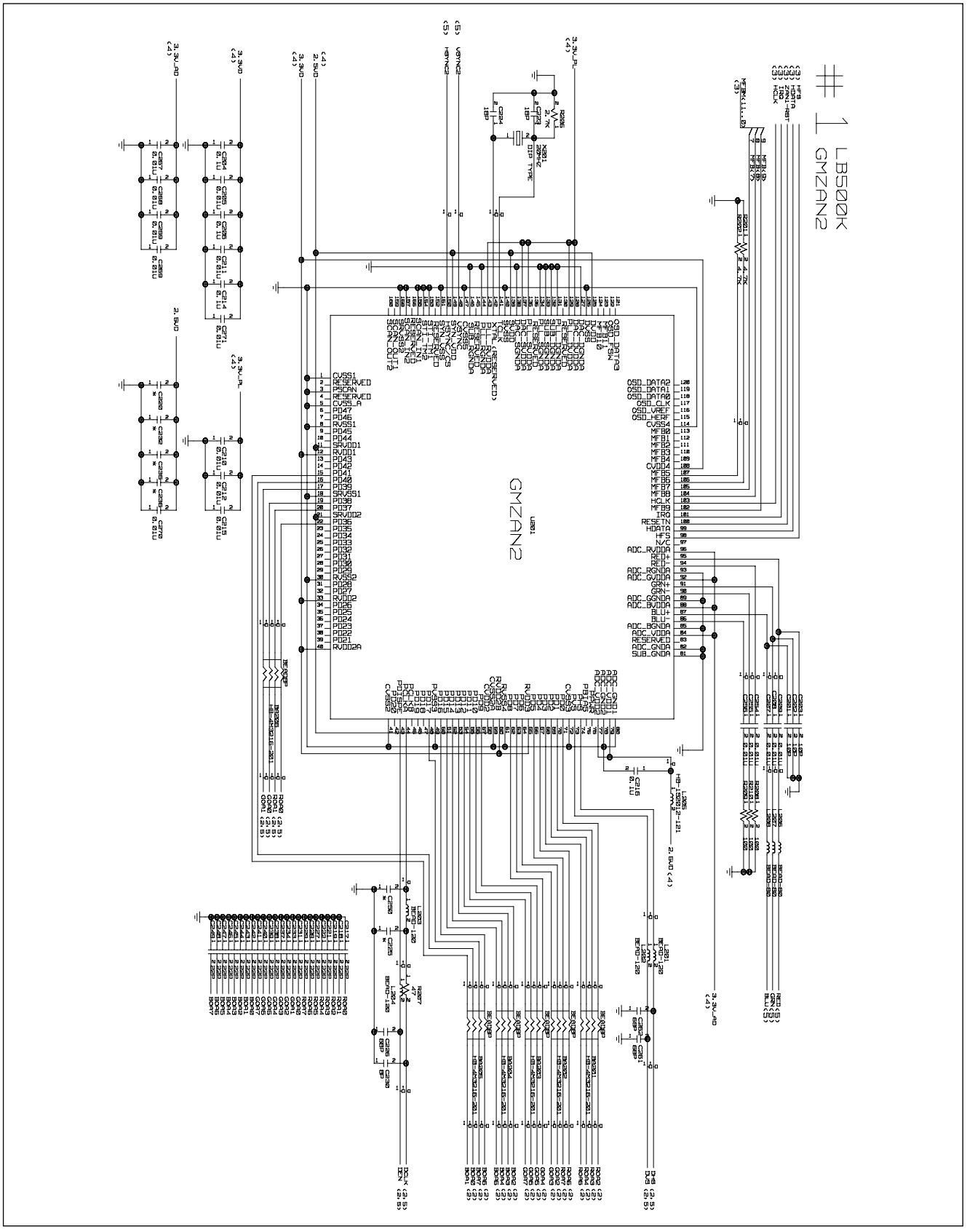



### BLOCK DIAGRAM

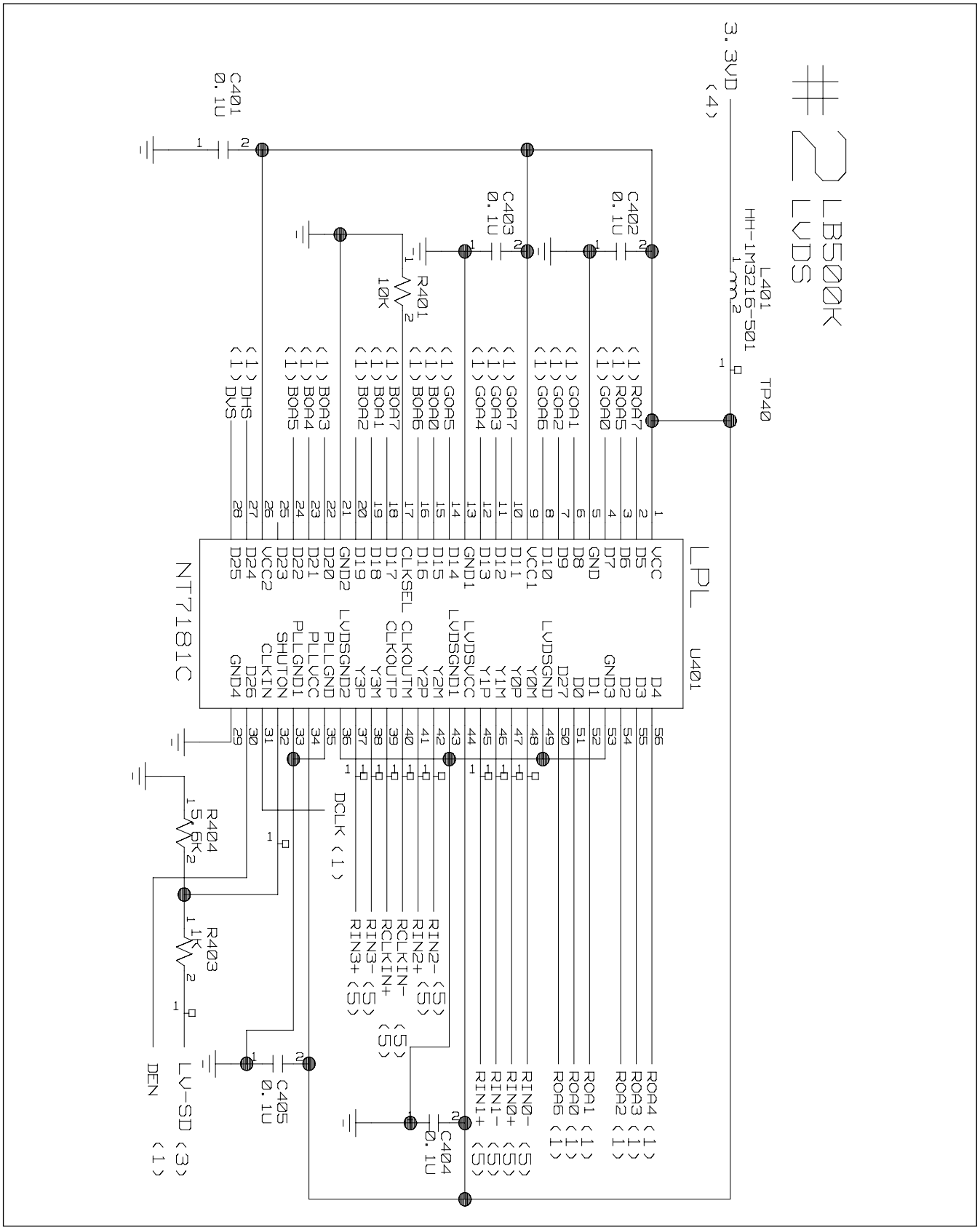


# SCHEMATIC DIAGRAM

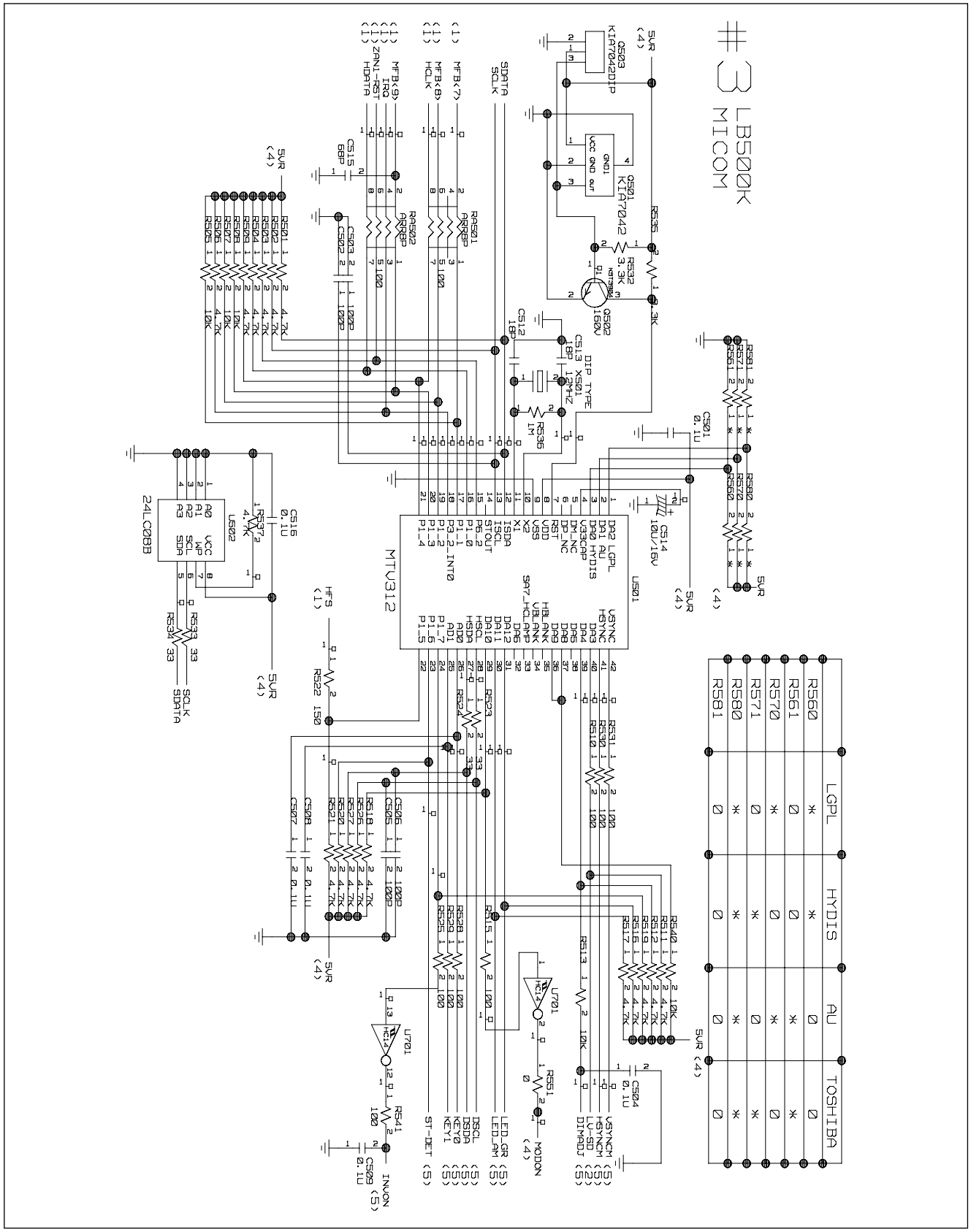
## 1. GMZAN2



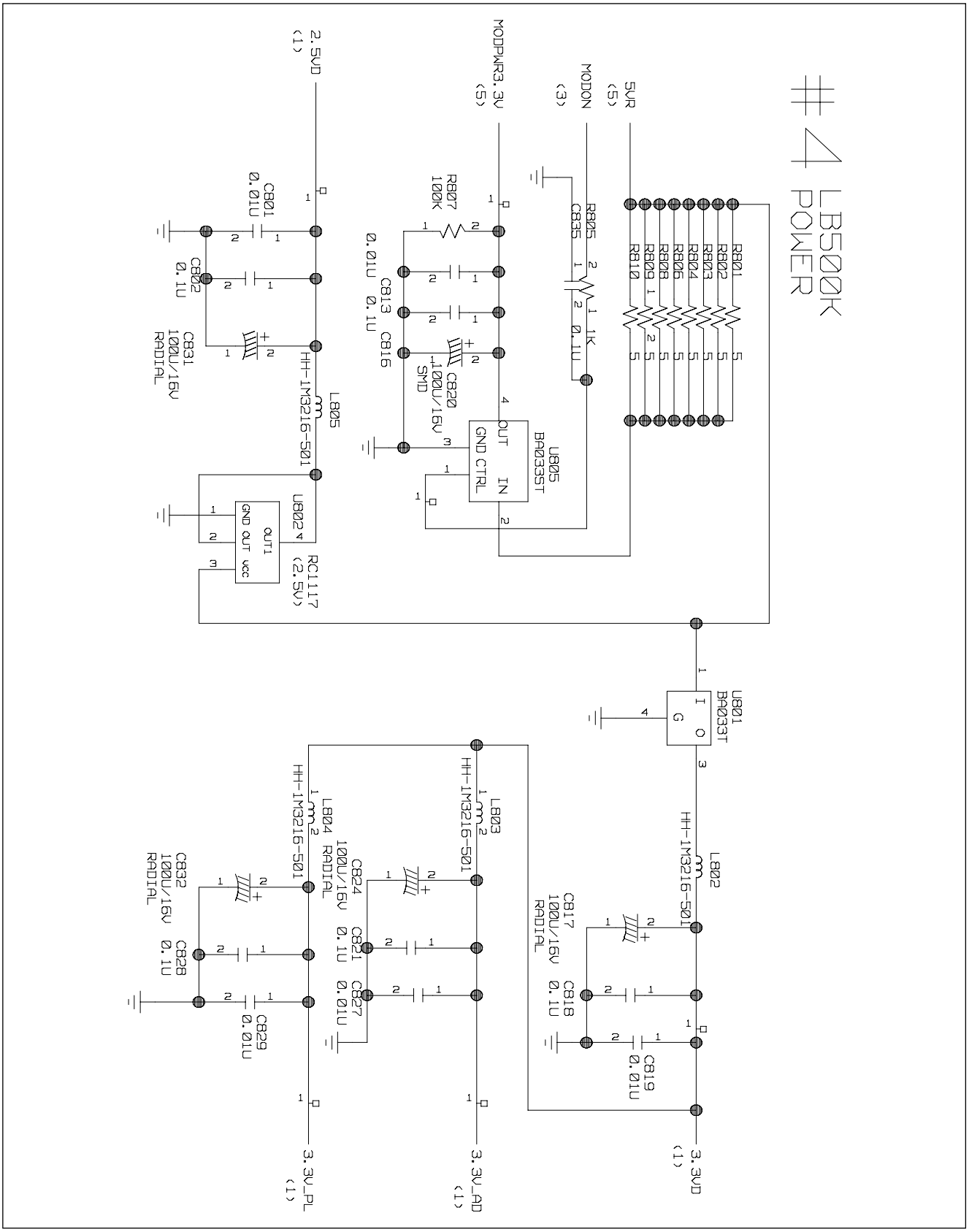
## 2. LVDS


#2 LB500K LVDS
3.3VD (4)
L401 HH-1M3216-501
TP40
C401 0.1U
C402 0.1U
C403 0.1U
R401 10K
R404 5.6K
R403 1K
C404 0.1U
C405 0.1U
LV-SD (3)
DEN
DCLK (1)
LPL U401
NT7181C
VCC D5 D6 D7 GND D8 D9 D10 VCC1 D11 D12 D13 GND1 D14 D15 D16 CLKSEL D17 D18 D19 GND2 D20 D21 D22 D23 VCC2 D24 D25
D4 D3 D2 GND3 D1 D0 D27 LVDSGND Y0M Y0P Y1M Y1P LVDSVCC LVDSGND1 Y2M Y2P CLKOUTM CLKOUTP Y3M Y3P LVDSGND2 PLLGND PLLVCC PLLGND1 SHUTON CLKIN D26 GND4
(1) R0A7 (1) R0A5 (1) G0A0 (1) G0A1 (1) G0A2 (1) G0A6 (1) G0A7 (1) G0A3 (1) G0A4 (1) B0A7 (1) B0A1 (1) B0A6 (1) G0A5 (1) B0A0 (1) B0A2 (1) B0A3 (1) B0A4 (1) B0A5 (1) DHS (1) DVS
R0A4 (1) R0A3 (1) R0A2 (1) R0A1 (1) R0A0 (1) R0A6 (1)
RIN0- (5) RIN0+ (5) RIN1- (5) RIN1+ (5) RIN2- (5) RIN2+ (5) RCLKIN- (5) RCLKIN+ (5) RIN3- (5) RIN3+ (5)

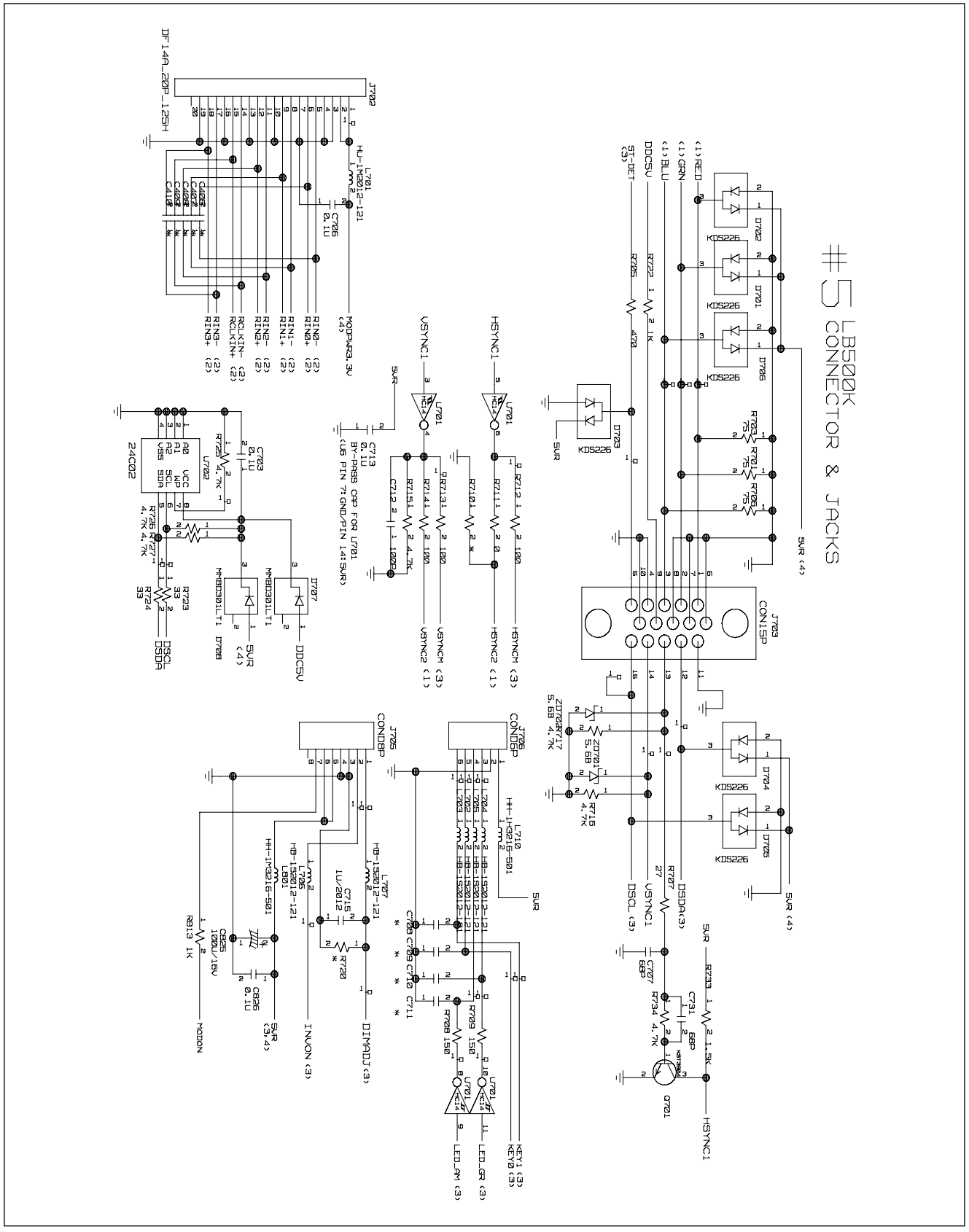
## 3. MICOM


#3 LB500K MICOM
MTV312
24LC08B
KIA7042
KIA7042DIP
LGPL
HYDIS
AU
TOSHIBA

## 4. POWER


#4 LB500K POWER
5VR
(5)
MODON
(3)
MODPWR3.3V
(5)
2.5VD
(1)
R801
R802
R803
R804
R806
R808
R809
R810
R805
C835
1K
0.1U
R807
100K
C813
0.01U
0.1U
C816
C820
100U/16V
SMD
C801
0.01U
C802
0.1U
C831
100U/16V
RADIAL
L805
HH-1M3216-501
U805
BA033ST
OUT
IN
GND
CTRL
U802
OUT1
GND OUT Vcc
RC1117
(2.5V)
U801
BA033T
I
O
G
L802
HH-1M3216-501
C817
100U/16V
RADIAL
C818
0.1U
C819
0.01U
3.3VD
(1)
L803
HH-1M3216-501
C824
100U/16V
C821
0.1U
C827
0.01U
3.3V_AD
(1)
L804
HH-1M3216-501
RADIAL
C832
100U/16V
C828
0.1U
C829
0.01U
3.3V_PL
(1)

## 5. CONNECTOR & JACKS



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